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# THE AMERICAN ELEVATOR AND GRAIN TRADE

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A MONTHLY JOURNAL DEVOTED TO THE ELEVATOR AND GRAIN INTERESTS.

One Dollar Per Annum  
SINGLE COPIES, 15 CENTS

VOL. XXXIX.

431 South Dearborn Street, Chicago, Ill., March 15, 1921

NO. 9

WE ARE PROGRESSIVE ENOUGH  
TO BE AGGRESSIVE FOR YOU

**McKENNA & DICKEY**  
Grain

60 BOARD OF TRADE

For your  
Business Sake  
Communicate

**HARRIS, WINTHROP & CO.**

52 Broadway, New York

The Rookery, Chicago

**GRAIN—STOCKS—BONDS**

MEMBERS

New York Stock Exchange New York Cotton Exchange  
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New York Coffee Exchange Chicago Board of Trade  
Winnipeg Grain Exchange Kansas City Board of Trade  
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OF

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AND

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Seed**

Mail Samples for Top Market Bids

**Milwaukee  
Seed Company**

MILWAUKEE, WIS.

Established 1877

**LANGENBERG BROS. GRAIN CO.**  
**GRAIN and HAY**

We Solicit Your Consignments

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Kansas City

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**THE ILLINOIS SEED CO.**  
**GRASS SEEDS FIELD**

BUYERS

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Ask for Samples

Mail Samples for Bids

TIMOTHY, CLOVERS, ALSIKE, ALFALFA, MILLETS, RED-  
TOP, BLUEGRASS, SEED GRAIN, GRAIN BAGS, Etc.

**A. E. Schulz**

Mechanical Engineer

PNEUMATIC GRAIN CONVEYORS  
PNEUMATIC BOAT UNLOADERS  
PNEUMATIC CAR UNLOADERS  
PNEUMATIC CAR LOADERS

20 E. JACKSON BLVD.

CHICAGO, ILL.

**The WAGNER**

Covers all markets. Ask for the weekly or  
daily issue. Has the largest circulation of any  
grain literature.

Stocks E. W. Wagner & Co. Bonds  
Grain Members New York Stock Exchange  
Members New York Cotton Exchange  
Members Chicago Board of Trade  
Continental & Commercial Bank Bldg.

**LETTER**

Established 33 Years

CHICAGO

**COURTEEN SEED CO.**

Specialize in all

**GRASS AND FIELD SEEDS**

SHIPPERS. Send Samples for Bid.

BUYERS. Ask for samples and prices.

MILWAUKEE, WISCONSIN

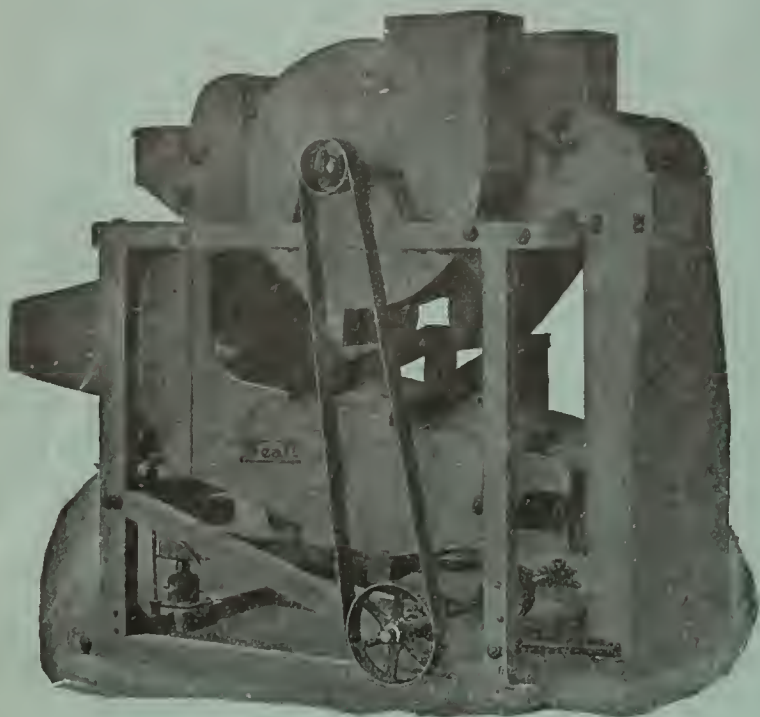
**BACHE SERVICE**

USE IT  
ON

**GRAIN AND SEEDS**

Chicago, Ill.





Built in ten sizes

**Beall**  
THE MARK OF QUALITY

The gateway to successful grain elevator business lies through

## Beall Warehouse and Elevator Separators

Let us interest you in the unusual merits of these machines today. Write for particulars.

**THE BEALL IMPROVEMENTS CO., Inc.**  
Decatur - - - - - Illinois



## Where to Stop in Minneapolis THE CURTIS HOTEL

Tenth St., 3rd to 4th Aves., MINNEAPOLIS, U. S. A.  
Six Blocks From the Chamber of Commerce.

*Every Room an Outside Room. Every Room with Private Bath.*

**This Hotel Caters to the Grain and Milling Trade—Especially Suited to Conventions**

Average rate for room and bath—\$2.50 single—\$3.50 double.

Entertaining programs are rendered daily during luncheon and dinner hour on the great pipe organ in main restaurant by Dr. Frederic Tristram Egner. Orchestra music daily during dinner hour.

One whole city block of beautiful lobbies, ball rooms, billiard rooms, chocolate shop, beauty shop, barber shop, tailor shop, physical culture and bath department, cigar and news stands, delicatessen shop, etc., are operated in this hotel for the convenience and entertainment of our guests.



## RID-OF-RATS

Patented, is Non-Poisonous and can be used anywhere without risk of killing house pets or injuring human beings. Eight years on the market. If your dealer don't carry it, send direct to the manufacturers.

**THE BERG & BEARD MFG. CO.**

100 Emerson Place

Brooklyn, N. Y.

Price \$1.80 per doz. boxes; \$1.00 per lb.

(Discount quoted upon request.)

We also manufacture a very effective Gopher Exterminator.

## 1920 Steel Work for Grain Plants

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Hales & Edwards,  
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Regular Length, 7 inches

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## Milling Kinks

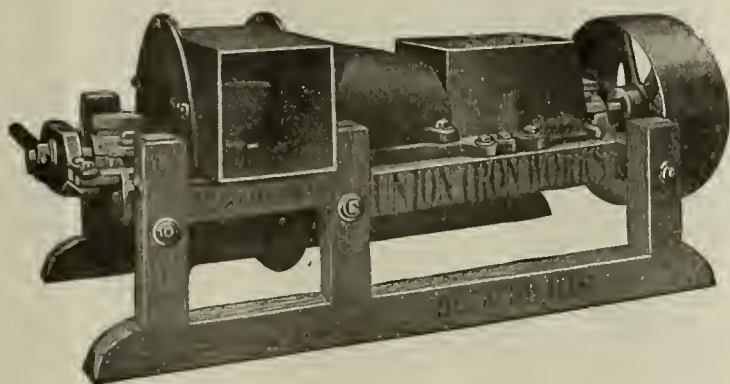
The latest book for grain elevator operators and millers. The second edition is being rapidly exhausted. A companion book to the Book of Wrinkles. Contains 169 illustrated devices assembled and classified for ready reference.

PRICE, \$1.25 POSTPAID

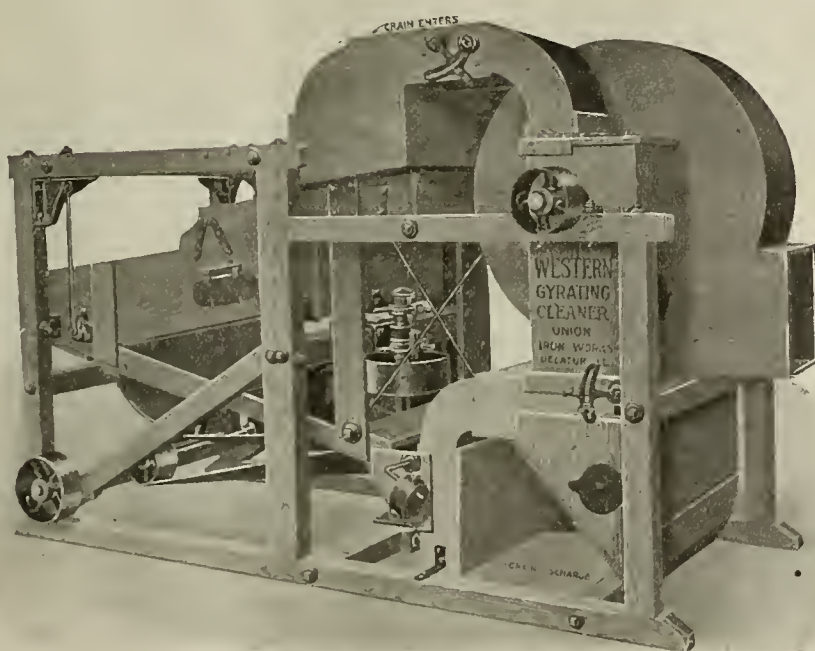
**Mitchell Bros. Publishing Co.,** 431 S. Dearborn St., CHICAGO, ILL.



## Our Spring Sale Announcement



"Western" Pitless Sheller



"Western" Gyrating Cleaner

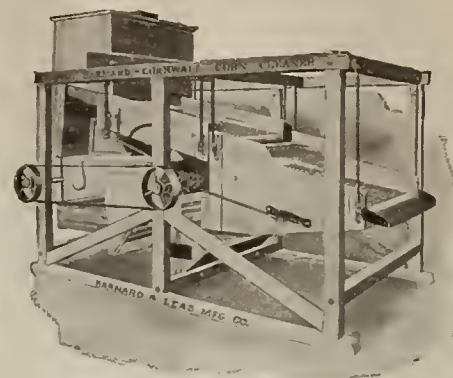
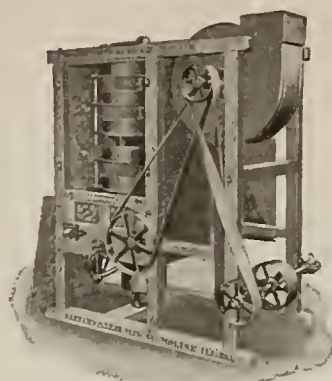
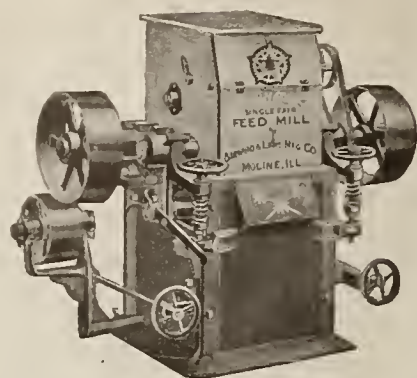
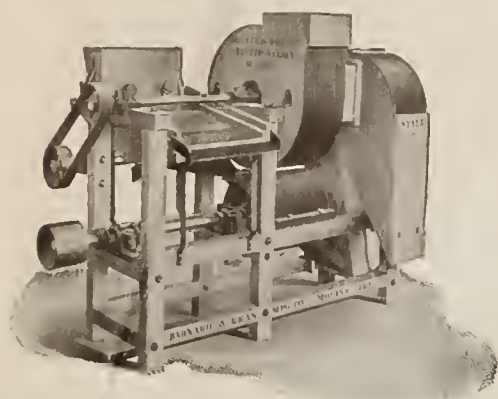
We take pleasure in announcing a special spring sale of Grain Elevator and Power Transmission Machinery and Western Shellers and Cleaners at prices that will interest you. No need to put off ordering the needed new equipment. Buy Now.

*Send for New Catalog No. 27*

**UNION IRON WORKS**  
DECATUR, ILLINOIS

*Complete Line of Shellers and Cleaners Kept at*  
1400-1402 West 12th Street      KANSAS CITY, MO.





# For Sixty-one Years

## Barnard & Leas Mfg. Co.

### Have Taken the Lead

in the manufacture of modern, up-to-date, high-grade Elevator and Feed Mill machinery, and have held the reputation of always being the FIRST to come to the grain dealers aid in building machinery to make the grain handling business more profitable.

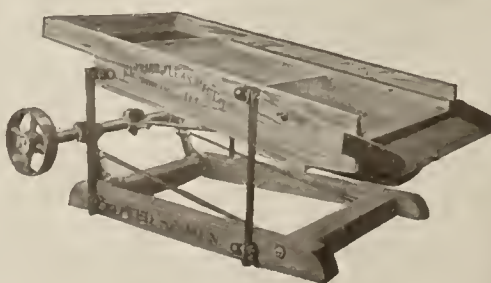
We have also taken the LEAD in REDUCING PRICES to enable our grain dealer friends to go ahead with their new building and remodeling problems and our office has been flooded with letters of appreciation of this loyal act.

LET US QUOTE ON YOUR REQUIREMENTS

*"You'll be surprised at the reductions"*



**BARNARD & LEAS MFG. CO.**  
MILL BUILDERS AND  
MILL FURNISHERS  
ESTABLISHED 1860. MOLINE, ILLINOIS, U.S.A.





# Meeting the Demand of the Man Who Knows

WHEN the Chicago & Northwestern Railroad built its new 1,000,000-bushel terminal elevator at Council Bluffs, Iowa, in 1917, the contract was placed with the Wither- spoon-Englar Company of Chicago. Arrangements had already been made with the Updike Grain Company of Omaha to operate it. Now N. B. Updike, who owns the company, has an uncanny knowledge of elevator operation. He has an intimate practical understanding of all the intricate details which go to make a successful plant, and to a large extent dictated the important features of the plant.

Out of his extensive experience as an elevator operator, Mr. Updike knows that it is not the first cost that determines the expense of equipment. A slight difference in operating cost and upkeep soon eats up the spread between the cheap and the good installation, and that thereafter a clear gain can be made with the best purchase. Is it any wonder then that Morse Silent Chain Drives are found throughout the house?

The elevator is driven with individual motors ranging from 5 to 100 horsepower. On the three receiving legs, the three shipping legs and one transfer leg are 100 horsepower drives, seven in all. On each of the two separator legs is a 75-horsepower drive; the two clipper legs and the one drier leg

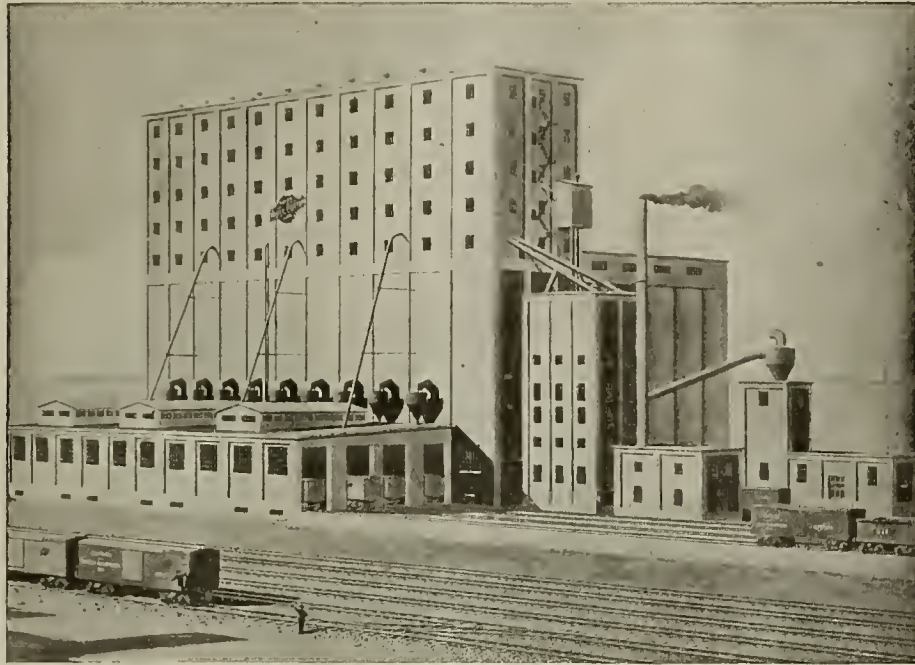


DRIVE IN C. & N. W. ELEVATOR AT MILWAUKEE

are driven by a 35-horsepower Morse Chain for each; the two drives to the car shovel countershafts are of 30-horsepower each; the cupola transfer conveyor has a 25-horsepower drive, as have also the countershaft for two screenings legs and each of the countershafts for two bleacher legs and one drier leg.

The three shipping conveyors, the three belt conveyors over storage, the four shovel shafts, the bleacher screw conveyor and the two drier fans have a 20-horsepower drive, a total of 13 of 20-horsepower. The two cooler fans are each driven with a 15-horsepower chain; the three receiving belt conveyors, the basement transfer conveyor, the drier belt conveyor, and the counter shaft for screenings screw conveyor each have a 7½-horsepower drive. The two screenings conveyor drives are of 5 horsepower.

There are in all 42 Morse Silent Chain Drives in the house, handling 1,457½ horsepower. All the sprockets on the drives have a face ¼-inch wider than the chain specified to run them. The driving sprockets are steel hardened, bored and key-



CHICAGO & NORTHWESTERN ELEVATOR AT COUNCIL BLUFFS, IOWA  
Equipped with Morse Silent Chain Drives

seated to fit the driving shafts. The driven sprockets are of solid cast iron. All the chains are improved, heat treated, nickel steel type, with Morse Rocker Joint.

The specifications for this extensive equipment were accepted because the operators understood the importance of power transmission. Equipment in all departments of a plant might be perfect, but if their services were interrupted with faulty transmission that perfection would be innocuous. And again if power were wasted with less efficient drives, the saving effected with high-class machines would be neutralized and very possibly more than discounted.

Transmission is the life of a plant. It corresponds to the arteries which carry the blood and power to the human mechanism. Arterio sclerosis is a disease of the arteries which slows down the sufferer to a point of virtual helplessness. His life is under perpetual threat and any untoward exertion might end it. As a functioning machine he is undependable. The parallel is exact. A diseased or inefficient transmission may at any moment tie up the activities of the entire plant. Even though this event is postponed indefinitely the threat of it is always present and presents an additional and wholly unnecessary worry for the elevator manager.

It is not by chance that Morse Silent Chain Drives have become practically standardized in equipment where dependable power is required. The engineering profession which builds its reputation by the test of performance, selects the best by a process of gradual elimination of the unfit



## MORSE CHAIN CO.

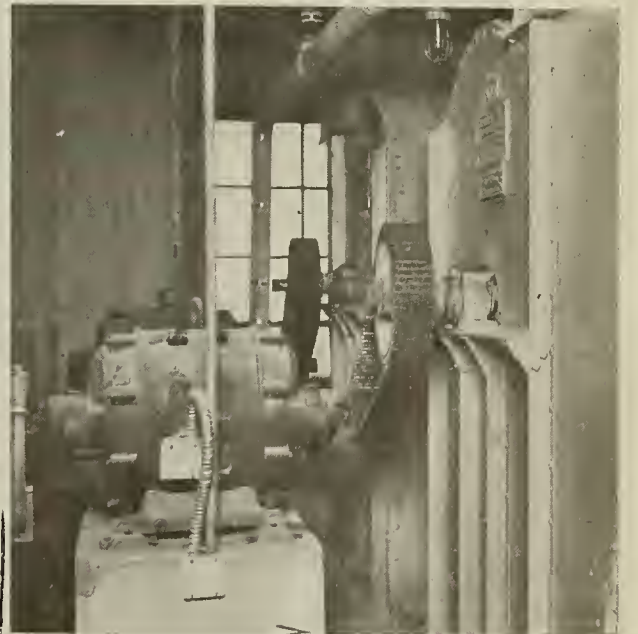
ITHACA, N. Y.

Engineering Sales Offices in Principal Cities

equipment. The law is as inexorable as Darwin's. A reputable firm can no more afford to install a drive which may fail at the most critical juncture than nature could afford to let the weaklings survive and the strong perish.

It is not by chance that Morse Drives are found in the Milwaukee elevator of the Chicago & Northwestern Railroad, the splendid new elevator of the Washburn-Crosby Company at Minneapolis, the Northern Central Elevator at Canton, Baltimore, Md., and scores of other modern plants throughout the country. Illustrations of typical installations in the elevators named are shown on this page. In no case were these selections haphazard. The Morse Drives in every case were used because the designers of the houses know that they can be relied upon; know that in all kinds of weather and under all conditions the drive will deliver its rated power when and where specified. The grain

trade for many years did business with makeshift equipment, but now dealers are satisfied with nothing but the best. Why should they when the best is cheapest in the end. That is a claim which can be made without question or doubt for Morse Silent



MORSE DRIVES ON ELEVATOR HEADS

Chain Drives. On the one hand the chain drive has all the flexibility of the belt or rope and can be operated successfully on very much shorter centers than either of the others, which, in a great many positions in the average elevator, is a distinct advantage. On the other hand the chains are as positive as gears; there is no slip nor creep with the resultant loss of power and excessive depreciation such as belts are subjected to; nor is there the unpleasant rattle that always accompanies gear installation. The scarcely audible hum of a chain drive, a steady, sustained tone, is symbolic of the power, the dependability, and all around efficiency of the Morse Silent Chain Drive. There is ample justification for the tendency to standardize on chain drives, even at a slightly higher

original cost, for the operating service of the drive has again and again demonstrated that it is cheapest in the end. Chain Drives are supreme transmission.—Advertisement.



# CINCINNATI

## THE GATEWAY TO THE SOUTH AND EAST

Has the "square deal" plugging system for hay.

Has reconsignment and transit privileges and other favorable points which insures most successful handling of grain or hay shipments.



Home of the Cincinnati Grain and Hay Exchange

Is the terminal point for 200,000 miles of railways and therefore a convenient shipping point for the country dealer, and local buyers are enabled to distribute all products quickly and to best advantage. Has weighing and inspection service second to none and up-to-date grain and hay merchants constantly safeguarding their patrons' interests.

Those are just a few of the reasons why you should ship your Grain and Hay to Cincinnati. Ship to any of the following responsible grain and hay firms, all members of the

## Cincinnati Grain & Hay Exchange

A. BENDER, Flour, Grain and Feeds  
 BINGHAM-SCHOLL GRAIN CO., Grain Exclusively  
 BROUSE-SKIDMORE GRAIN CO., Grain, Hay, Feed  
 BLUMENTHAL, MAX, Grain, Hay, Feed  
 COSTELLO GRAIN & HAY CO., THE JOSEPH F., Hay and Grain  
 THE D. O. CROSS CO., Grain, Hay, Mill Feeds

CURRUS GRAIN CO., Grain and Hay  
 DE MOLET GRAIN CO., Grain and Hay  
 EARLY & DANIEL CO., Hay, Grain, Feed  
 FITZGERALD BROS. CO., Grain and Hay  
 GALE GRAIN CO., THE A. C., Grain and Hay  
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 MUTUAL COMMISSION COMPANY, Strictly Commission  
 THE NUTRITIA COMPANY, Feeds





Trade Mark of Quality

# MODERN GRAIN ELEVATOR EQUIPMENT

ENDURANCE IS THE TEST OF QUALITY  
WELLER-MADE EQUIPMENT STANDS THE TEST



## WRAY FLEXIBLE SPOUTS (PATENTED)

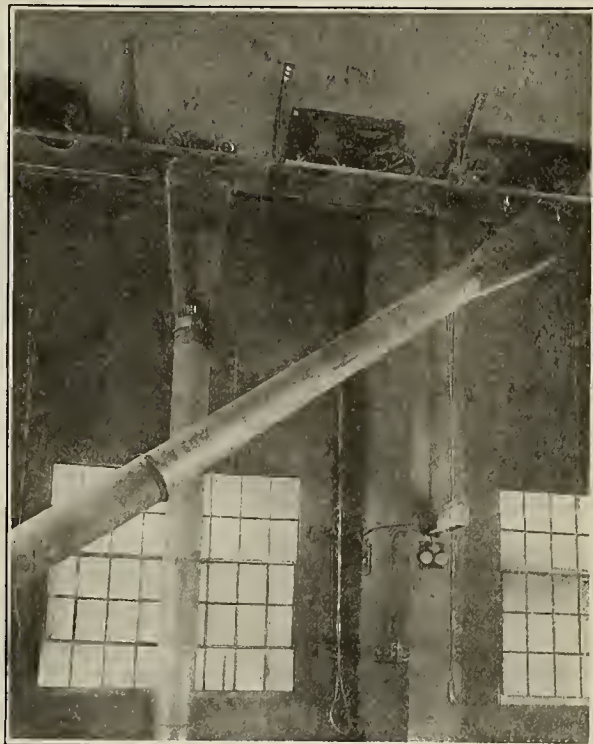
DUST PROOF,  
QUICK DISCHARGE  
Grain will run on less incline

DOUBLE LIFE  
Wear is on both sides of spout

LEVER EFFECT  
Has revolving joint

LABOR SAVER  
One man can change from place to place

Saves in height of building



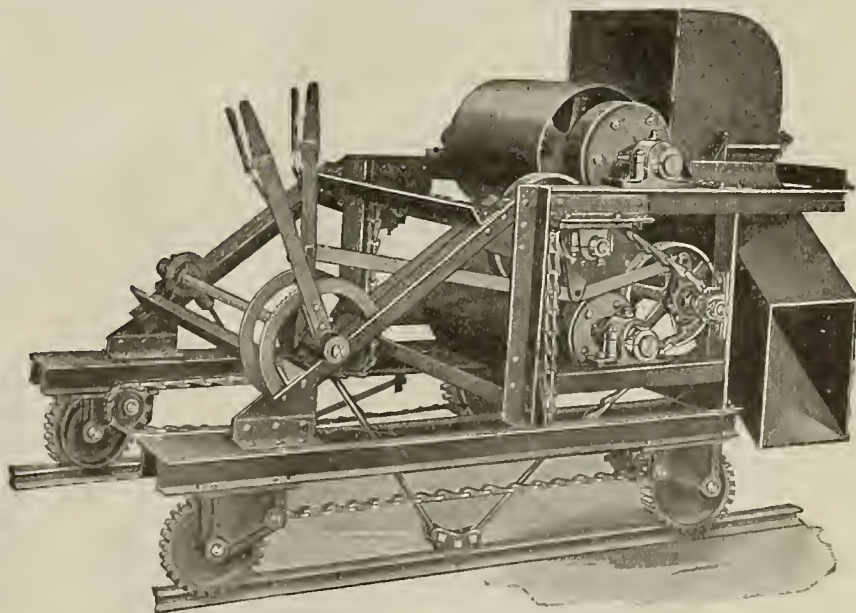
CALL ON US FOR  
BELT CONVEYORS  
DRAG CONVEYORS  
PAN CONVEYORS  
RIBBON CONVEYORS  
SPIRAL CONVEYORS  
ELEVATOR BOOTS  
ELEVATOR BUCKETS  
ELEVATOR CASINGS  
ELEVATOR HEADS  
DISTRIBUTING SPOUTS  
TRUCK DUMPS  
GRAIN DRIERS  
POWER SHOVELS  
CAR LOADERS  
CAR PULLERS  
CAR UNLOADERS  
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ROPE DRIVES  
PULLEYS  
HANGERS  
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GEARS  
SPROCKETS  
WELLER MADE STEEL CHAIN  
COAL HANDLING  
EQUIPMENT

## WELLER HEAVY DUTY SELF PROPELLING TRIPPERS (PATENTED)

Embodies Features Not Found in Any Other—Fully Protected by Patents

Weller Trippers are doing duty in most of the large elevators.

Large pulleys help to add to the life of the belt, while the wide clearance on each side of the belt and the double friction is so arranged that it is practically impossible for the belt to catch in the friction.



**WELLER MFG. Co.**  
**CHICAGO**

NEW YORK  
BOSTON

BALTIMORE  
PITTSBURGH

SAN FRANCISCO  
SALT LAKE CITY





The dynamic character of the Indianapolis market reaches to all receiving centers, making it the logical shipping point from central territory.

It attracts grain from the vast central arable plains and has proper connections with excellent billing facilities to all points, East, West, North, South.

The location and natural advantages of Indianapolis as a grain receiving and shipping center, therefore, makes it the best market in the country.

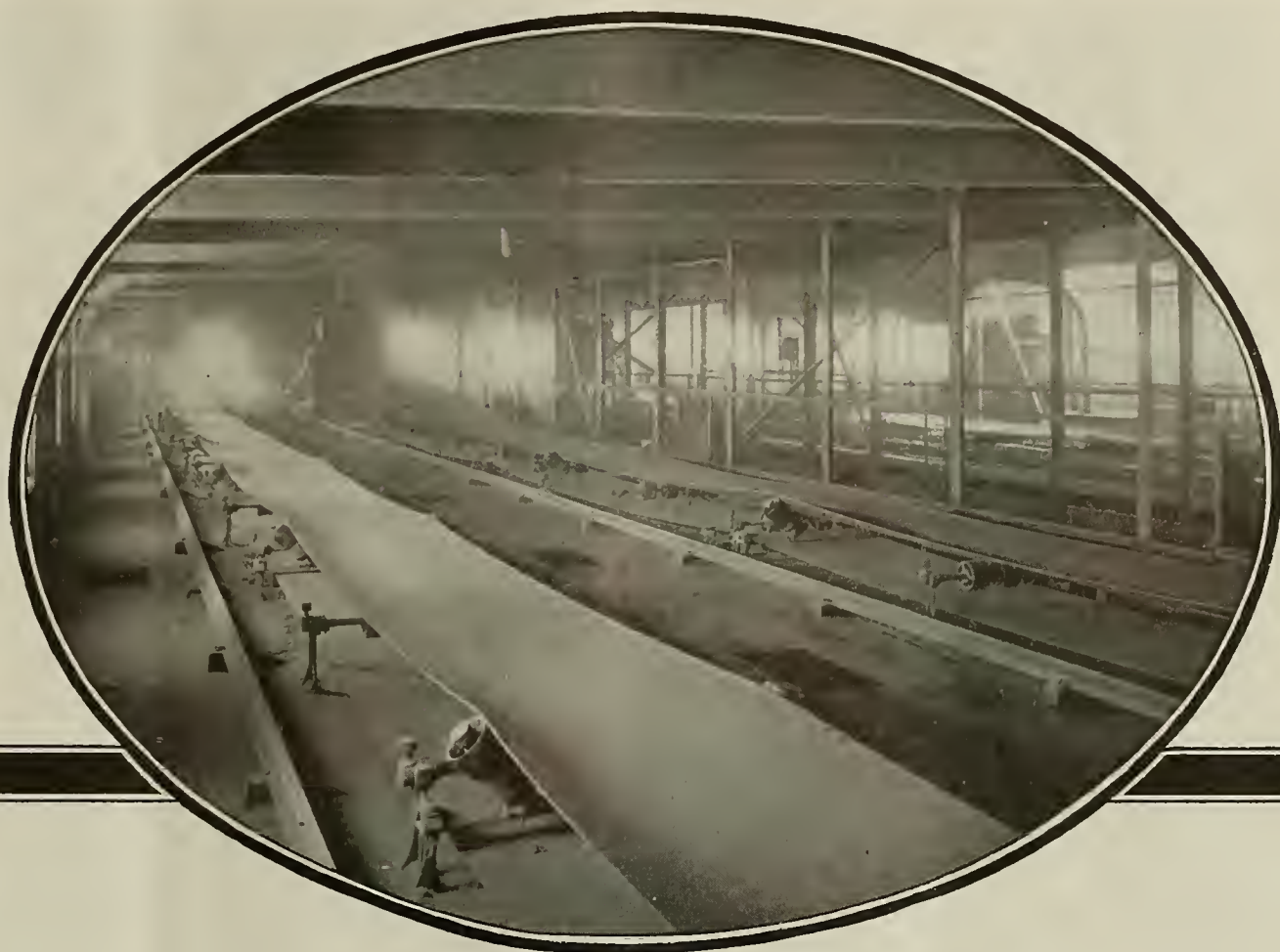
Ship your grain and hay to any of the following firms, all members of the

## INDIANAPOLIS BOARD OF TRADE

BIG FOUR ELEVATOR CO., Merchandisers of Grain  
 BINGHAM-HEWETT-SCHOLL CO., Grain Merchants  
 BERT A. BOYD GRAIN CO., Grain Commission  
 CLEVELAND GRAIN & MILLING CO., Grain Commission  
 THE EARLY & DANIEL CO., Grain Commission Merchants and Buyers  
 WM. R. EVANS GRAIN CO., Brokers and Commission  
 P. M. GALE GRAIN CO., Grain, Feed  
 HEINMILLER GRAIN CO., Receivers and Shippers  
 HAYWARD-RICH GRAIN CO., Commission, Brokerage

LEW HILL GRAIN CO., Strictly Commission  
 H. E. KINNEY GRAIN CO., Receivers and Shippers  
 LAMSON BROS. & CO., Grain, Seeds  
 McCARDLE-BLACK CO., Grain Merchants  
 CARL D. MENZIE GRAIN & BROKERAGE CO., Brokers and Grain Commission  
 NATIONAL ELEVATORS, Every Branch of the Grain Business  
 STEINHART GRAIN COMPANY, Grain Commission  
 URMSTON GRAIN CO., Grain Commission  
 FRANK A. WITT, Grain Commission and Brokerage





## U.S. Grain Conveyor Belts

Belt Conveyors, depend for their successful operation on the character of the belt used and its correct installation.

The success of U. S. Grain Conveyor Belts, which are daily carrying thousands of bushels of grain, is due to the materials used in their construction and to the care taken by our belting men in specifying only the proper belt for their customers' particular conditions.

**United States Rubber Company**

1790 Broadway

New York

*Branches in every industrial center*





# A TIMELY SUGGESTION

A MARKET to take care of your various needs—

A MARKET where you may sell your products—your **wheat, corn, oats, barley, rye, seeds, hay**, etc., receive the highest price, get the benefit of an excellent inspection and weighing service; where the usual and necessary time required for switching, unloading and final accounting for the property is reduced to a minimum—

A MARKET where you may buy your requirements in the **grain, seed or hay** line; or in the form of the manufactured goods, **flour—wheat or rye—corn products of all kinds, oatmeal and malt products—**

A MARKET where you can place your orders for the purchase and sale of “**futures**”, where hedging transactions are carefully and promptly executed—  
SUCH A MARKET is

# MILWAUKEE

*And any information you wish will be supplied by*

**THE MILWAUKEE CHAMBER OF COMMERCE**



# Preston Lansing

Vitrified Tile

## THE PERFECT GRAIN PROTECTION

Grain stored in Preston-Lansing Vitrified Tile Bins has absolute protection. It's safe from fire, rats, moisture and vermin—safe as long as you want to hold it.

The "ship-lap" blocks, re-enforced with twisted steel, provide beautiful walls with invincible strength—constructions that lasts for ages. They need no paint—no repairs. The glazed exterior defies wear. First cost is only cost.

Here's an investment that is permanent and satisfactory—one that figures cutting overhead costs, too. Write today for our special folder and ask about our engineering service.

### J. M. PRESTON CO.

Dept. 426

Lansing, Mich.

Factories at New Brighton, Pa.; Uhrichs-  
ville, Ohio; Brazil, Ind.; Ft. Dodge, Iowa.

Grain Bins and Elevator, Farmers Grain Co., Windfall, Indiana



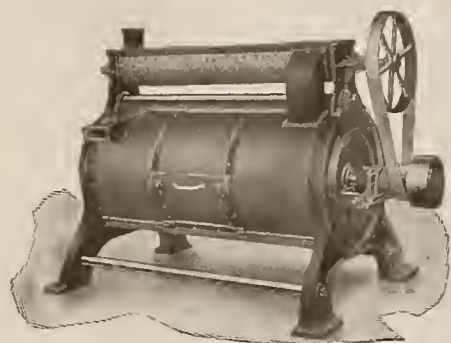
## The ELLIS ROTARY COOKER AND DIGESTER



In the preparation of certain foods and mixtures it is necessary to subject the product to the action of high pressure steam or other medium and during the process the material must be agitated or mixed. The ELLIS ROTARY COOKER AND DIGESTER is designed for that particular purpose. Built in three sizes. Quotations on request.

The Ellis Drier Company, 332 South La Salle St., Chicago, U. S. A.





THE WHEAT WASHER—SINGLE CYLINDER

## WASHING SMUTTY WHEAT IN THE ELEVATOR

Smutter wheat comes to the elevator. Shrewd elevator managers with the right vision have been washing this smutter wheat with big profits. They spout the dirty wheat from the car direct to the washer. When washed it is ready for re-shipping or storing.

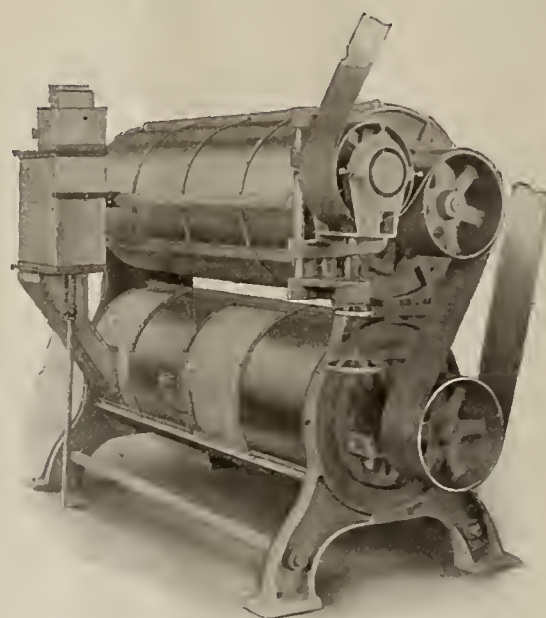
The Wolf-Dawson Wheat Washer and Drier performs eight operations and leaves the grain dry and in its natural bright color. No need for expensive drying columns as this machine dries and aerates to the desired moisture. Uses little power and water, the minimum attention and is a good profit maker.

Read Bulletin 94-M and learn its distinct advantages.

### THE WOLF COMPANY

*Flour and Feed Mill Machinery*

CHAMBERSBURG, PA.



THE WOLF-DAWSON WHEAT WASHER

## Order a Trapp Dump Now—Our Prices Are Reduced—

we have lowered them because we expect lower expenses for raw materials as well as labor.

We cannot guarantee that these reduced prices will continue indefinitely; but for the present you will **make a substantial saving** if you buy a Trapp Auto Truck Dump or a Trapp Combination Truck and Wagon Dump—either one will give you **absolutely satisfactory service** in dumping all vehicles that bring grain to your elevator.



You must know by this time, of the **universally successful service Trapp Dumps** have given. They are used to advantage in **every important wheat raising community**; and all our customers have been well pleased with results. Write and get the name and address of the elevator nearest you in which a Trapp Dump is already installed; you can drive over; inspect it; and make a careful examination of the dump before you buy.

We would advise you to **order a Trapp Dumping System at once**. Prices are down now; and you will need this successful, economical, and **perfectly safe** dumping equipment. Write to the factory today.

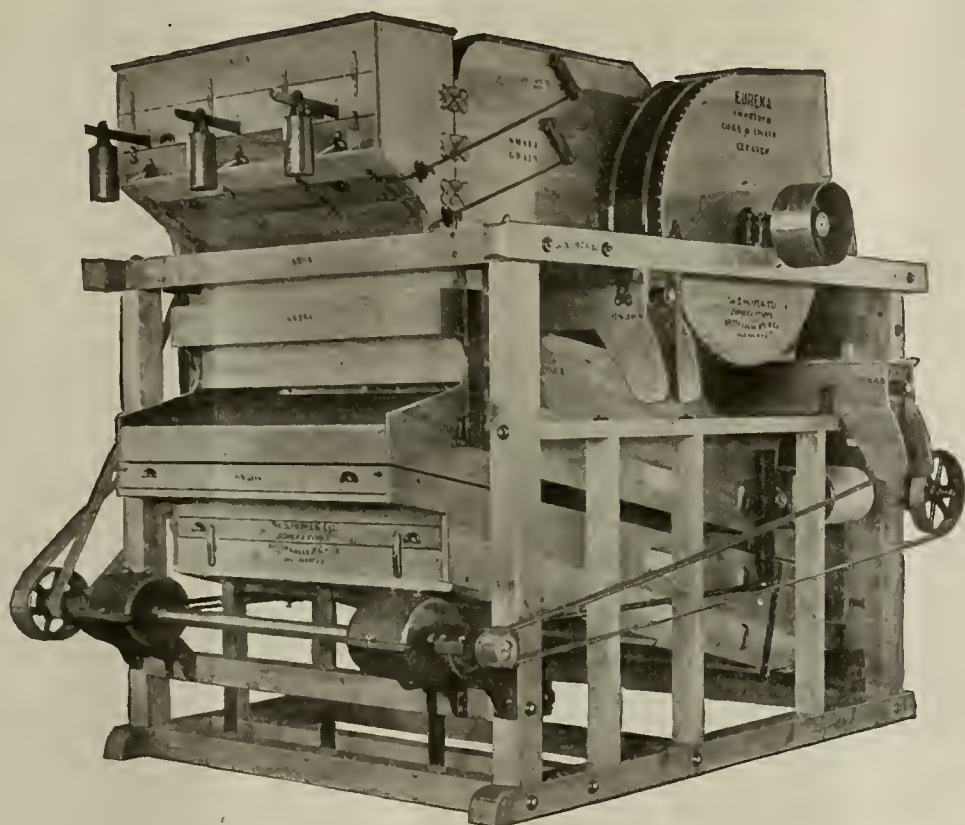
### Trapp-Gohr-Donovan Co.

1125-27-29 No. 22nd Street

:::

Omaha, Nebraska





**THIS NEW EUREKA**  
for Cleaning  
**CORN and SMALL GRAINS**  
is  
**A Masterpiece of Efficiency!**

We purposely ask you to forget any preconceived standards you may have had of efficiency, because we believe this Cleaner is going to sweep aside every precedent of desirability that you may have had of any machine designed for a like purpose.

This, our latest offering, represents the utmost in highly developed knowledge and skill.

*Write for special bulletin*

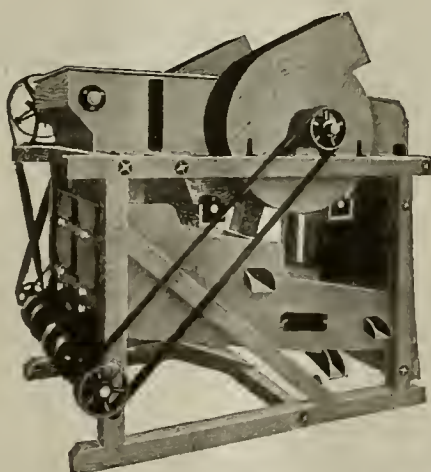
**S. HOWES CO., Inc.**  
Eureka Works Silver Creek, N. Y.

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Geo. S. Boss, Osburn House, Rochester, N. Y.  
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The Brinkley Company, Seattle, Wash.  
C. J. Groat, 522 Board of Trade Building, Portland, Oregon.



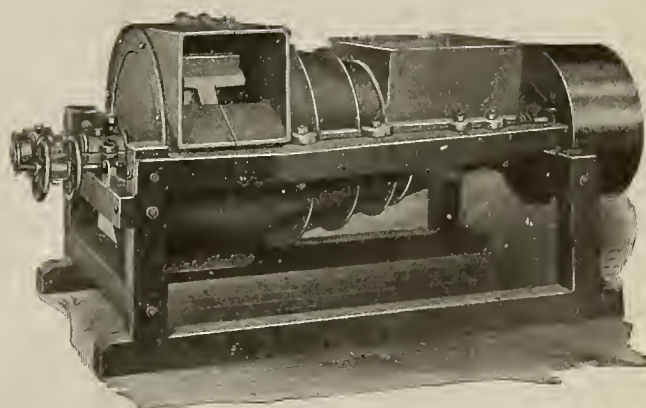
**Eureka**  
Service Satisfies



U. S. Twin Shoe Receiving Separator



Constant  
Safety  
Ball-Bearing  
Man-Lift



U. S. Corn Sheller

**The Reconstruction Period**

finds us prepared in all respects to meet the wants of the grain trade in our usual efficient manner with prices to meet the new conditions. Quality has been and will continue to be our motto.

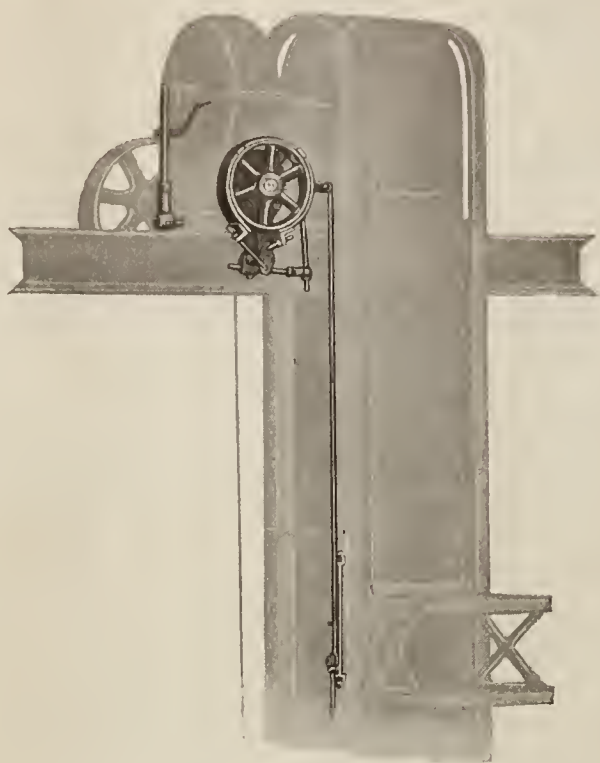
**CONSTANT GRAIN ELEVATOR MACHINERY**

is known the world over as the best machinery procurable for grain elevator work. We shall maintain this reputation throughout 1921.

*Write for our late catalog*

**B. S. CONSTANT MANUFACTURING CO.**  
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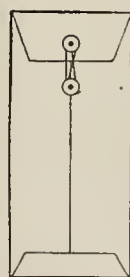


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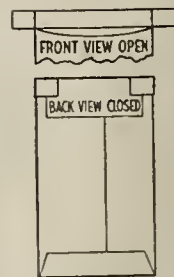
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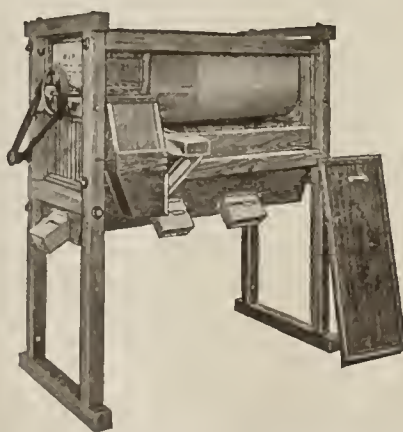


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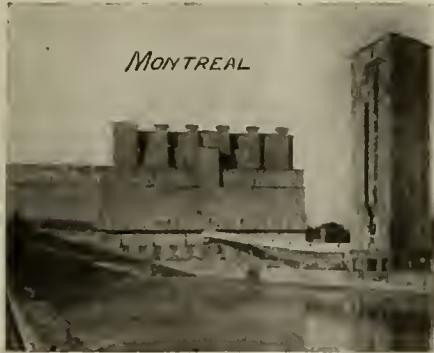
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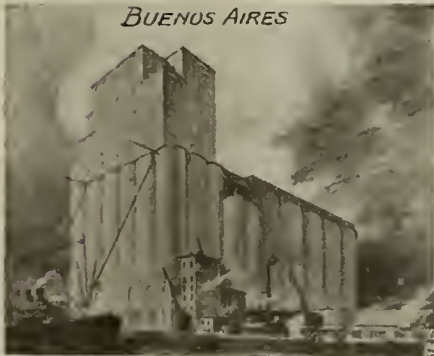
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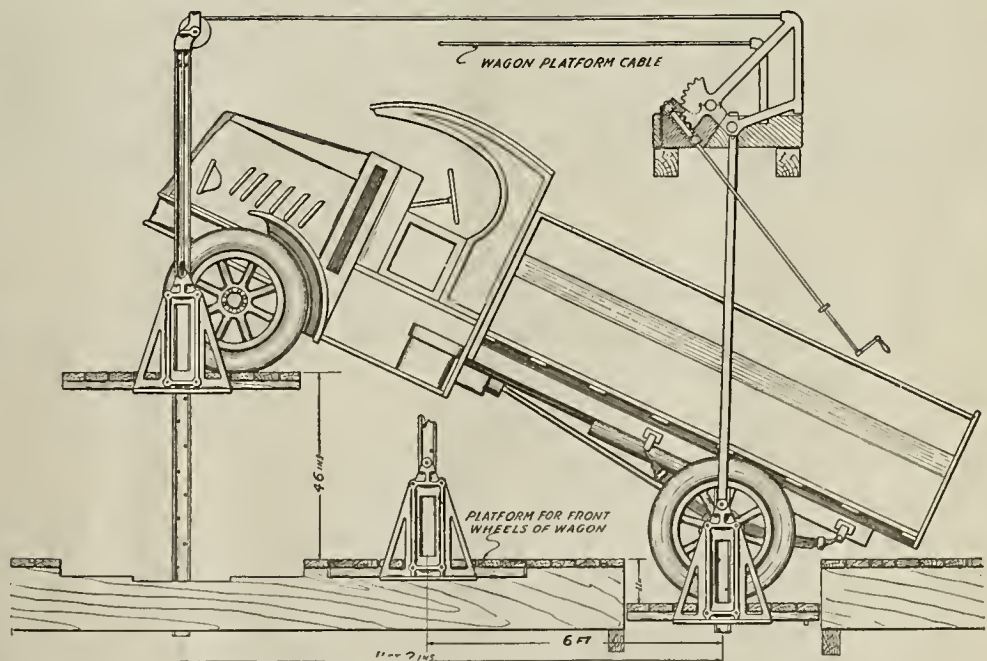
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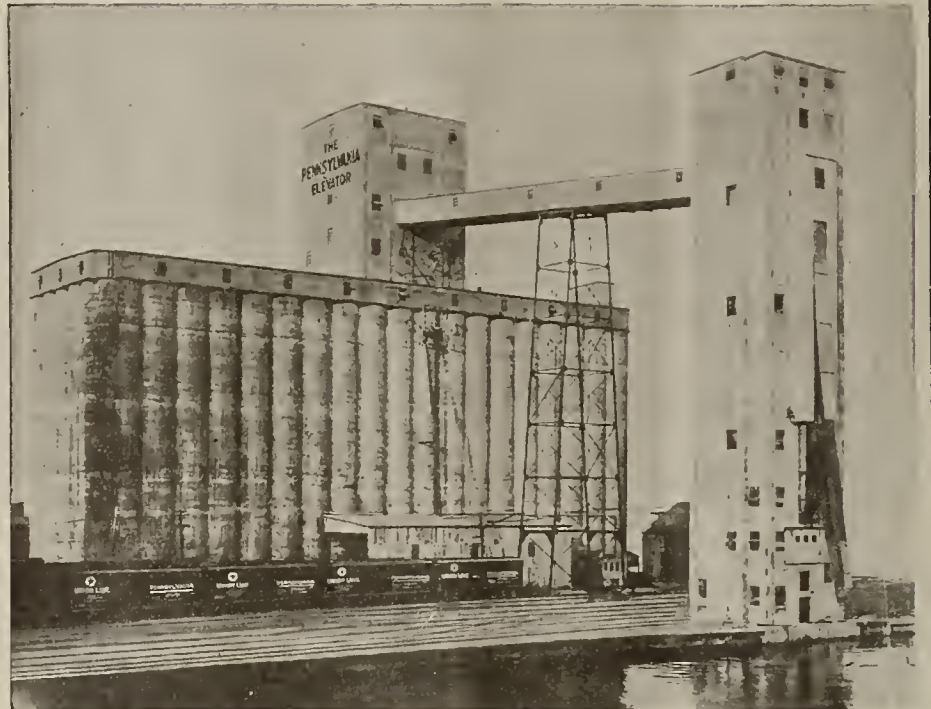
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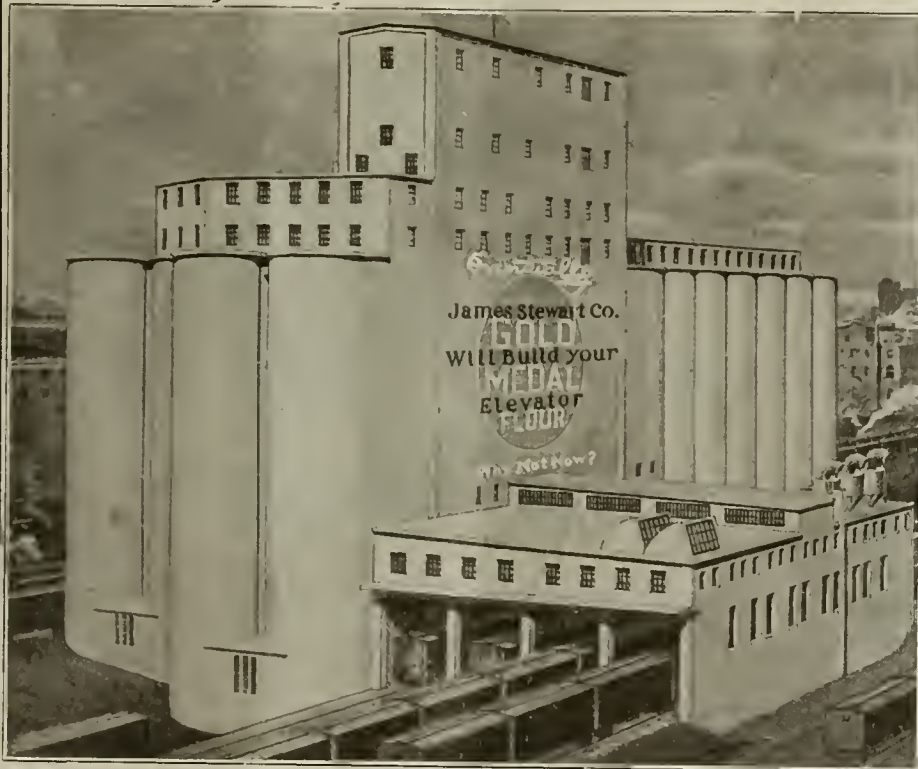
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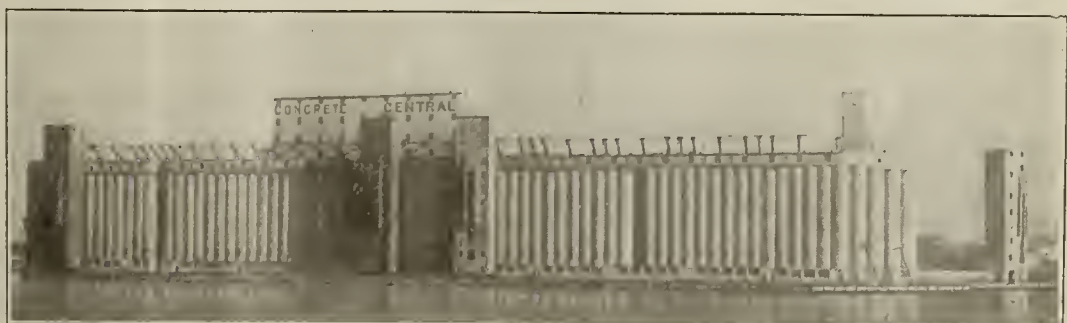


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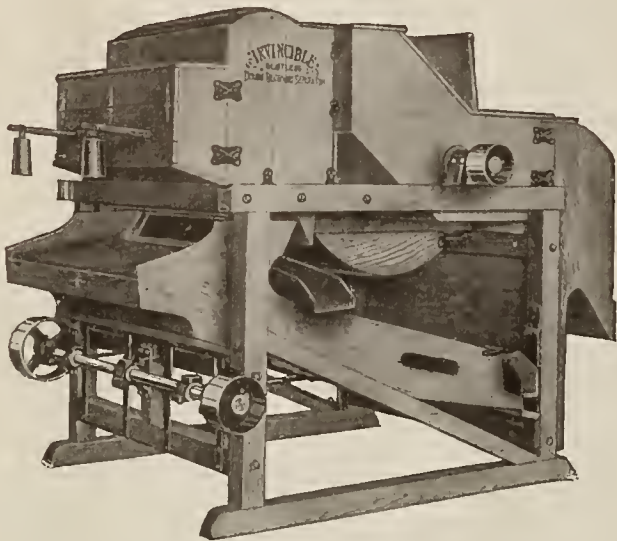
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\* In those many mills and elevators long served by Humphrey Elevators, you will find the employees do more work, save their energy and credit the Humphrey for it all. They even say—"We couldn't possibly do our work without it."

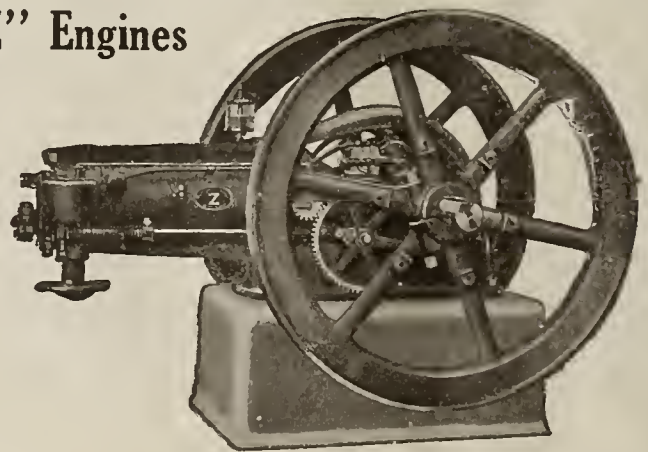
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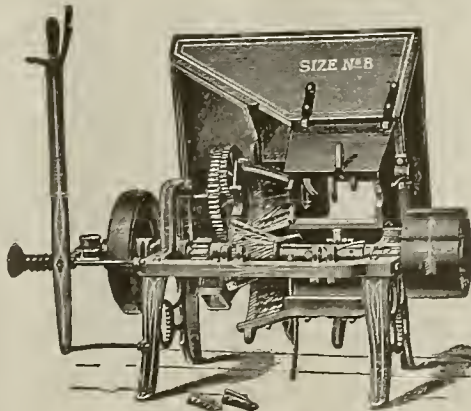
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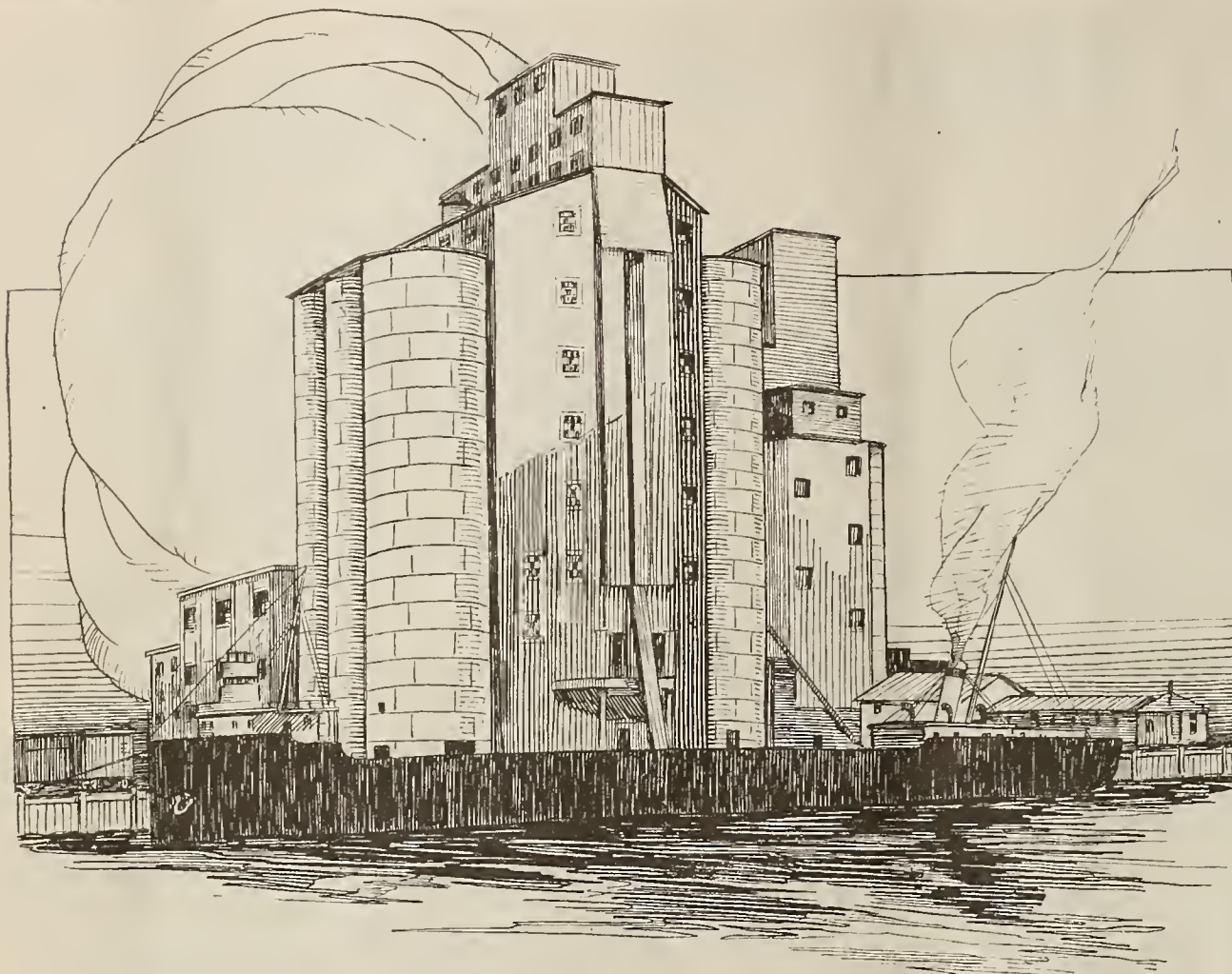
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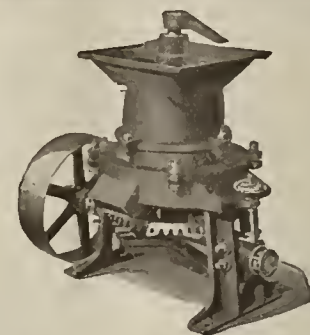


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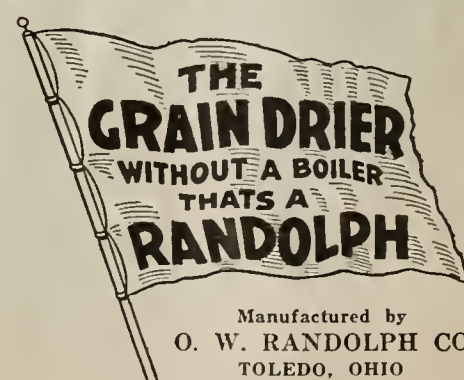
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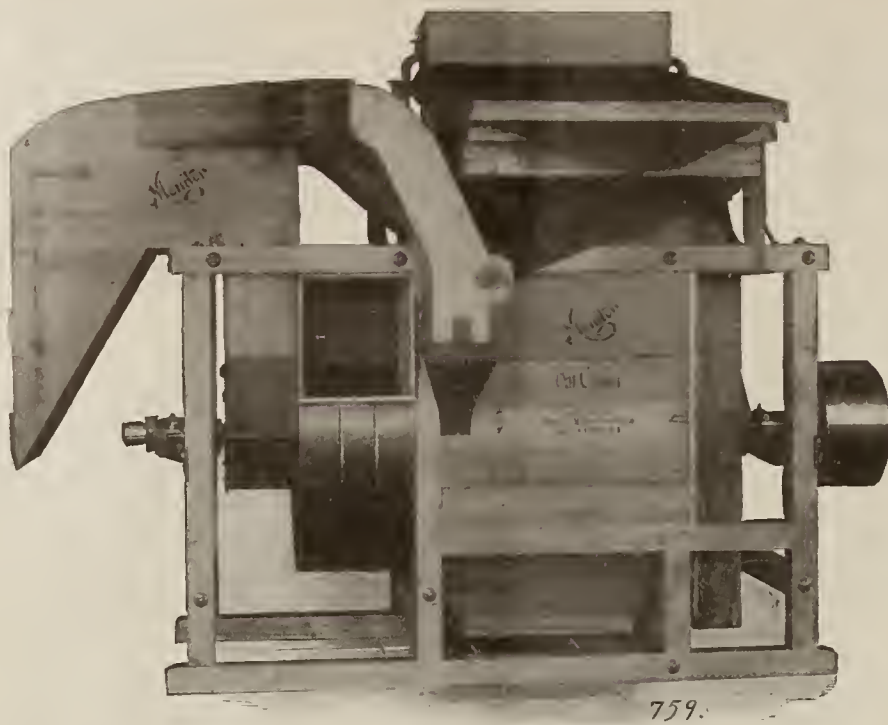
### **The Day Dust Collecting System**

is installed in the new, large Northern Central Elevator at Canton, Baltimore, Md. We have just equipped the three Rock Island elevators at Kansas City, Mo., with complete systems.

*For catalog write*

**THE DAY COMPANY, Minneapolis, Minn.**





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Each day you delay in placing a MONITOR means a day of heavy loss in sure profits. Would you hesitate to buy a machine with which you could legally and quickly produce dollars? A MONITOR Clipper will do just that.

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DEPARTMENT E

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A monthly journal devoted to the elevator and grain interests.

Official paper of the Grain Dealers' National Association and of the Illinois Grain Dealers' Association.

Established in 1882.



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Subscription price, \$1.00 per year.

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Established in 1882.

VOL. XXXIX.

CHICAGO, ILLINOIS, MARCH 15, 1921

NO. 9

## Progress Marks Grain Handling Facilities in Iowa

**Storage Annex in Plant of the Farmers Terminal Elevator Company of Council Bluffs, has Numerous Features of Interest to Builders and Operators**

THE average man is naturally conservative. He is willing to admit in a general way that the next 5 years will see marked progress, but at the same time most of us believe in our hearts that the particular tools which we use each day have reached the last stage in development. It is well, no doubt, that this is so, otherwise there would be no market for any commodity; everyone would be waiting until further and complete development was attained.

We can imagine the complacent satisfaction which the owner of the first automatic grain elevator must have felt. Here surely was the very last word in grain handling devices. Nothing could excel this mechanism. To be sure he shoveled the grain from the wagon or car by hand, even to the elevator boot, but it was elevated by buckets driven by a steam engine, and was loaded out by gravity. This was the only automatic part of the operation, but we have no doubt he imagined that human ingenuity could go no further. Along in the seventies he may have added a wagon dump and a Clark Power Shovel, and again imagined that the last word had been said. Perhaps he wished it hadn't been said if he had to pay the various claimants for the patent rights on his dump. Old timers will remember the controversy over the McGrath, Swickard and Sypes patents. Gradually new devices were introduced until the grain elevator really became automatic in fact as well as in theory.

Are we any better off at the present time? Each new elevator is "the last word," and yet who can doubt but the newest will be wholly obsolete in the next 50 years. But we, too, are conservative and we willingly put the "last word" stamp on the completed Farmers Terminal Elevator Company's plant at Council Bluffs, Iowa. It meets every requirement of the market, and although it is a year and a half old in its present state there are a number of features about the plant which still rank it among the progressives of modern construction.

The original house was built some years ago. It consisted of a headhouse and a battery of tanks, the whole having a capacity of 750,000 bushels. Even at the time of building, this capacity was of doubtful magnitude so that the plans were made

for the addition of more storage without interference with the working of the first unit. It wasn't long before this suspicion was verified, and a short time after, James Stewart & Co., Inc., of Chicago, was given the contract for a new battery of tanks, and these were completed in June, 1919.

The new tanks have a capacity of 500,000 bushels and in their construction and equipment have a number of interesting points.

The tanks are 101 feet high with a 9-foot gallery

economical operation. Variation in temperature makes a great difference in belt tension, and on a cold morning when the fibers of the belt hug up closer to keep warm, the power necessary to run the conveyor is all out of proportion to the ordinary load.

This uniformity in tension, therefore, serves a double purpose. It preserves the belt and lengthens its life materially, and it also makes it much easier on the motors, for they do not have a peak load, and the capacity of the motor can be gauged to the normal requirements of the conveyor, without the necessity of installing a power unit great enough to take care of this peak and larger than is normally required.

This new annex has five electric motors, four of 15 horsepower and one of 20 horsepower. The power is transmitted by Morse Silent Chain Drives which combine the flexibility of belts and the positiveness of gears.

In the construction of the tanks the James Stewart organization made one of the first, if not the first, application of a new principle in tank construction which promises much for the future. Instead of building the tanks up from a solid concrete base, hoppers for the discharge, the walls of the tanks are erected direct from the foundation slab. For a short distance above the base pilasters are erected, 10 in each tank, and on these pilasters rests a riveted steel cone which acts as the bottom of the tank. It is, of course, amply fortified to sustain the great weight of the grain in the tank.

This method of construction leaves the entire base of the tanks open, instead of having to build a separate galley for the accommodation of the shipping

conveyor. The difference in construction cost is very considerable, and the increased advantages are numerous. The illustration on the following page shows the shipping conveyor in the open basement under the tank hoppers.

The elevator is well located in Council Bluffs for convenience in both receiving and shipping. On one side of the house are three receiving tracks with two pits on each track. Grain comes from a wide territory, for shippers in Iowa, Nebraska and the Dakotas have found the market favorable in rates. On the opposite side of the elevator is another



PLANT OF THE FARMERS TERMINAL ELEVATOR COMPANY, COUNCIL BLUFFS, IOWA

above and a base below rail level of 8 feet 3 inches. The circular bins, of which there are 10, are 26 feet 6 inches in diameter, inside. Above and below the tanks is a 36-inch belt conveyor with a cross conveyor to the head. This belting was furnished by the Gutta Percha & Rubber Manufacturing Company, and it has a capacity of 15,000 bushels per hour. The conveyors also have automatic tighteners with idlers and suspended weights fastened to the wall. By this arrangement the belts can be kept at a uniform tension at all times, a consideration which is important to the life of the belt and to its







the Snow-Bartlett-Frazier report, were 186,000,000 bushels, or 23.7 per cent of the crop, compared with Snow's figures of 142,000,000 bushels last year. Taking into consideration Canadian imports of 42,000,000 bushels for domestic use, there appears to be a supply at this time, including spring seed requirements, of 350,000,000 bushels, or 28,000,000 bushels more than last year. Reserves of corn are 1,505,000,000 bushels, compared with 1,092,000,000 bushels last year. Oats supplies were 621,000,000 bushels, or 43.2 per cent of last year's crop, compared with 42,815,000 bushels, or 33.9 per cent last year. Disappearance of corn since November 1, 1920, the report says, has been on a smaller scale than usual, while Goodman says the reverse. Snow's figures are 1,831,000,000 bushels, compared with 1,895,000,000 bushels last year. Disappearance of oats from the farms was about the same as from the smaller and higher priced crop of last year, and about 100,000,000 bushels less than from the crops of 1918 and 1917. This is unusual for there is usually a large waste from a big crop.

## LEGISLATIVE INTERFERENCE

Warning to producers against destruction of the nation's grain marketing machinery by enactment of class legislation or formation of powerful farmer groups or control of prices is contained in the February business review bulletin of the National City Bank of New York.

The speculator, according to the review, performs an extremely useful task by carrying the crops from the time they leave the producer until they reach the consumer. "And whoever carries products for a future market is taking risks, and therefore must be classed as a speculator," it says.

"The truth is that the Chicago market is the chief hedging market for dealers and millers over the world. Trading there is related to the grain and flour business of the world, and not merely to the crops of this country. The markets fluctuate as we have seen because conditions are always changing, and sellers as well as buyers, farmers as well as traders, are quick to want price changes if conditions change in their favor.

"It is better to have a fluctuating market than no market at all. Some of the most bitter complaints in recent months have alleged that farmers could not get a bid for their products. There have been times in the last six months when wool-growers have said there was no market for their products."

The present broad, open grain market is a protection to the farmer, according to the review, and restrictions in volume of transactions would "destroy or limit the usefulness of market places and impair the reliability of the market. As a matter of fact commodities traded in upon the exchanges have fallen no faster or farther than those not traded in, but have fared quite as well or better, as witness comparisons with wool, rubber, copper, rice and livestock.

"The proposal to control the production and marketing of farm products so that a farmer will know when he plants his crops what he will get for it, and always be assured of a fair profit, will be attended by very great difficulties. It involves disconnecting markets and prices in the United States from markets and prices in other countries, which would mean the discontinuance of agricultural export or imports or else includes the task of stabilizing prices all over the world."

After referring further to price-fixing proposals, the review declares that such "plans seem to develop logically into guild socialism."

## NEW BOOK OF GRAIN RATES

Under date of March 3, Manager J. S. Brown of the Transportation Department of the Chicago Board of Trade announces publication of No. 5 East of Mississippi River Book of Grain Rates. Mr. Brown's announcement is as follows:

"There is now ready for distribution the publication entitled 'No. 5 East of Mississippi River Book of Grain Rates,' containing rates on grain to Chicago, Local and Proportional, from all points in

Illinois and Indiana, also points in Iowa and Missouri on the west bank of the Mississippi River, as well as minimum weights.

"This new publication supersedes the present 'No. 4 East of Mississippi River Book of Grain Rates' and contains the rates as finally readjusted under the various percentage increases made since August 25, 1920. The price of the publication is \$6 per copy and copies may be had by application to this department. Remittances should be made payable to Transportation Department, Chicago Board of Trade."

## NEW STORAGE FOR CENTRAL KANSAS

When the Security Elevator Company of Hutchinson, Kan., completed its new concrete elevator early last fall, it added 500,000 bushels to the storage capacity in the Southwest and became one of the

storage annex consisting of 16 circular tanks and 17 bins 96 feet in height. In the headhouse there are 31 bins of various size, the total capacity of the plant being 500,000 bushels. It can handle 30 cars both in and out per day, and as the house is served by the Rock Island, the Missouri Pacific, and the Santa Fe Railroads, it is rare when there is not some car movement about the place.

The equipment of the house consists of a power shovel; two 2,000-bushel and one 1,000-bushel Howe Hopper Scales; one Eureka Cleaner; one Eureka Clipper. Operation is by electric power, 15 motors of various kinds being employed, transmitting their power by belt or chain.

The house has three elevator legs and two large belt conveyors in the gallery over the tanks, while three belts in tunnels bring the grain from storage ready to be elevated and shipped.

The house is a public bonded elevator and maintains a licensed weighmaster and an inspector from



NEW SECURITY ELEVATOR, HUTCHINSON, KAN.

most important links in the movement of grain from the Kansas producer to the consumer.

The company succeeded the Hugoton Warehouse & Elevator Company, and the original plant of the former concern is now only one of 17 elevators operated by the Security company. Besides the one at Hugoton the company's elevators are located at Pierceville, Ensign, Haggard, Sublette, Satanta, Rolla, Montezuma, Copeland, Elkhart, Liberal, Minneola, Ford, Joy, Hayne, and Moscow, Kan., and Guymon, Okla. These stations originate some of the finest Dark Hard Turkey wheat in the world.

Hutchinson is the natural terminal for all these stations and the new elevator there is well equipped to take care of all the grain that is offered, for the company has a strong merchandising department which easily finds an outlet for almost unlimited amounts of grain. More Milo and Kaffir is handled through the house than through any other, perhaps, in the Southwest.

The company consists of Charles Summers of Liberal, president; Lee Larrabee of Liberal, secretary; Frank and Ralph Summers of Liberal, the additional directors. G. C. Hipple of Hutchinson is manager, and Paul Phillips, assistant manager.

The new house consists of a headhouse, 40x64 feet on the ground plan and 174 feet high, and a

the state grain inspection department. The inspector's office is equipped with electric moisture testers and other apparatus, making it one of the most efficient in the department.

The elevator was planned so that it can be enlarged at any time by the addition of more storage, all the facilities being planned to take care, ultimately, of 2,000,000 bushels' capacity if it should be needed. But as it stands the house is a most important addition to the grain industry in Hutchinson, and has already proved itself an important factor in the trade of the Southwest.

## AMERICAN CORN IN MEXICO

American corn is being sold in Chihuahua, Mexico, for the first time in five or six years, according to the American consul there. Present prices indicate that corn will be brought to Mexico for some time. Mexican corn in bulk is selling for 100 pesos or \$50 United States currency per ton while American corn in sacks can be laid down in Chihuahua for 95 pesos or \$47.50 United States currency. It is stated that the American corn is cleaner and of a better grade, and therefore brings a higher price than the native corn. Corn is used more than any other grain.



## Plant Construction and Dust Explosions

A Study of the Relationship between Construction Standards and Dust Explosion Hazards, with Special Reference to the Port Colborne Disaster

By DAVID J. PRICE and H. H. BROWN\*

IN THE effort to design effective equipment for the prevention of dust explosions during the handling or milling of grain, the Bureau of Chemistry of the United States Department of Agriculture has thoroughly investigated explosions of this nature in grain handling plants. As a rule each investigation brings forward many new developments; in some instances new causes are advanced, in others the extent of the explosion has been largely affected by the arrangement and construction of the plant.

### DEVELOPMENTS IN DUST EXPLOSION INVESTIGATIONS

In recent dust explosions in large terminal grain elevators, built of fire resistive materials, there was extensive damage to property, many men were killed, and considerable grain was destroyed, definitely establishing that plants so constructed must be well maintained and the dust explosion hazard recognized. The construction of the plant can be a factor in explosion prevention and also in contributing to the extent of the explosion, if the construction permits of the presence of dangerous quantities of dust.

It is desired at this time to bring to the attention of structural engineers the important relation of construction of dust explosions, as developed in recent investigations. That "fire proof" plants are not necessarily "dust explosion proof" was well demonstrated by a disastrous dust explosion in a grain elevator in a South-western state resulting in the loss of 14 lives and extensive property damage.

A few months previous, a plant in Wisconsin constructed of fire resistive material was destroyed by a dust explosion during the handling of cottonseed meal, causing the death of three men, injuries to four others, and considerable property damage. In an

explosion of starch dust in a Middle Western factory 43 lives were lost and property destroyed to an amount in excess of \$3,000,000.

This article reviews the investigation of a dust explosion, in August, 1919, in the grain elevator operated by the Canadian Government at the Lake Erie entrance of the Welland Canal at Port Colborne, which resulted in the loss of 10 lives and injuries to a similar number, with extensive damage to the plant. The explosion was investigated by the Bureau of Chemistry in cooperation with the commission of officials of the Canadian Government, of which Lieutenant-Colonel C. N. Monsarrat was chairman. The article considers particularly the relation of certain features of construction to the extent of the explosion.

### DESCRIPTION OF PLANT

This elevator was a storage and transfer house and contained no cleaning machinery of any de-

scription. The plant was constructed entirely of steel and concrete and had a storage capacity of 2,000,000 bushels. It was 163 feet x 210 feet at the base and 165 feet high.

The elevator was so constructed that it was possible to unload and load boats or cars at the same time. There were four marine legs at the western side of the elevator for unloading boats, while there were six spouts at the east side of the elevator which were used for loading grain into barges or boats. At the northeast corner was a spout for loading cars. As normally operated grain was brought to the elevator in large boats from the head of the lakes, and this grain was transferred through the house into smaller barges which could pass through the Welland Canal.

There were nine lofters running the entire height of the house with a capacity of 22,000 bushels per hour each, and nine conveyor belts leading to hoppers discharging into the boots of the lofters, with a capacity of 20,000 bushels per hour each. The



CANADIAN GOVERNMENT ELEVATOR AT PORT COLBORNE—EAST SIDE, BEFORE EXPLOSION

lofters discharged into receiving hoppers. Below these receiving hoppers were two sets of automatic scales having a capacity of 24,000 bushels per hour. From these scales the grain discharged into garner, from which it was carried by spouts or belt conveyors to either the storage bins or shipping bins, or directly to spouts leading into boats or cars for shipment. On the bin floor there were five conveyor belts for distributing the grain to the bins and four belts for carrying the grain direct to the loading spouts.

Each of the nine lofters was operated by means of a 125 h. p. 550 volt three-phase induction motor. The other machinery of the house was also electrically operated. All of the equipment was operated from a switch board located in a small room at the northwest corner of the building on what is called the working floor, being the first floor above the basement, and below what is termed the high storage of the elevator.

Each lofters was constructed as a double leg lofters from a point above the bin floor and below the bottom of the bins. However, in that portion of the building between these two points, the lofters belt ran through an elevator well 71 feet deep by 14 feet by 4 feet in cross section. The top of this well was covered by the bin floor which was made of 4-inch reinforced concrete and which was a part of the entire flooring over all of the bin storage. This well was tight and did not communicate with any

of the surrounding bins, with the exception of an opening 3 feet 6 inches long x 6 inches wide, on the east side underneath an 8-inch steel "I" beam.

The so-called high storage portion of the house consisted of a series of three bins running the entire length of the house. The hoppers of these were about 12 feet above the hoppers on the bins in the remaining portion of the house, while the floor over all the bins was on the same level. This made the hoppers of these bins in the high storage 69 feet below the bin floor while the hoppers in the remainder of the house were 81½ feet below the bin floor.

All of the bins in the high storage portion of the house were connected by an air space about 18 inches high below the bin floor while the bins in the remainder of the house were all connected by a seven-foot opening between the bin floor and the top of the bins.

The sides of all the bins were of a peculiar trough plate steel construction. This was claimed to strengthen the bin sides in such a way that it was not necessary to put any braces into the bins to strengthen the walls. These steel trough plates were built somewhat in the shape of the letter "S," but with a perpendicular side eight inches long with two plates from this set at an angle of 41 degrees from the horizontal, these also being eight inches wide, and then another 8-inch perpendicular side at the end of these angle plates. The distance from the top of one perpendicular side to the top of the next one below or above is two and one-half feet.

There was no cleaning or dust collecting system below the storage but in the upper working tower there were dust collectors installed which were used to draw the light dust from the top of the lofters heads, from the receiving bins, and also from the garner. Other collectors were installed which would draw the dust from the floor as it was swept up to openings leading to the collectors.

However, the portions of the dust collectors which drew dust from the top of the lofters were not allowed to operate fully since, in the opinion of the Grain Commission, they drew out suffi-

cient dust from the grain which was being handled in the lofters before it reached the scales to materially change the weight of the grain which was being handled. Consequently the dampers in these pipes were closed so that no dust was drawn from the lofters. However, a slight suction was allowed upon the receiving bins and garner to take care of the light dust which would rise from them and get out into the elevator.

### EFFECT OF THE EXPLOSION

In going over the ruins it was found that there was but very little damage to any of the building below the storage tanks. In the basement the only material damage seemed to be in a partially burned conveyor belt leading to lofters No. 8. This was burned for a distance of about 30 feet from the hopper leading to the boot of this lofters. A large number of the small panes of glass in the windows of the basement were also broken.

The casings to all of the legs of the lofters below the bottom of the bins, except the casings to lofters No. 18, were badly bulged and in the case of lofters No. 4 and lofters No. 14, a section of the steel plate, forming the casing of the down leg of the lofters, was entirely blown out. The casings of lofters No. 8 and No. 10, below the bottom of the bins, were black and the paint was burned off, showing that there had been intense heat inside of these lofters legs. No. 8 was black from the bottom of the bins to the boot, while No. 10 showed signs of fire only

\*Last month Mr. Price gave us an exhaustive research into the causes of a dust explosion in a South-western elevator, with special emphasis on the physical features of the plant, and suggestions on changes in construction to lessen some of the hazards which that explosion indicated. In the present article, Mr. Price, in collaboration with Mr. H. H. Brown, Organic and Physical Chemist, reviews the explosion in the Canadian Government Elevator at Port Colborne, Ontario, in August, 1919, and draws some further conclusions, with particular emphasis on the ventilation of storage bins and on the value of an automatic stop for choking elevators.



down to the working floor. Dust which had accumulated on the outside of the casing of loft No. 6 was charred, showing evidence of flame around it.

On the working floor near the center between lofts No. 10 and No. 12, there was a small wooden shack which was used as an office for the workmen on the lower floors. This was partially destroyed by the force of the explosion and by falling debris, but was not at all damaged by fire.

In all of the four marine towers there was some evidence of fire, but this was entirely in the dust which had accumulated at various points in these towers and also in the window casings which were of wood.

In the portion of the plant above the bins there was evidence of the greatest force of the explosion and it was above this point where there was the greatest damage. The bin floor was entirely destroyed and the roof over the storage section of the plant was also entirely blown off, as is seen in some of the accompanying photographs. Some portions of the side walls of the working tower were blown down and a large portion of the roof of the working house was blown off. Both ends of the tower were entirely blown off and the force of the explosion at these points was so great that heavy 8-inch steel "I" beams were blown off and carried some distance from the plant. The machinery in the working portion of the house did not seem to be greatly

hopper leading to the boot of loft No. 10 and also off of the sides of the conveyor belt carrying the grain to this hopper. This would indicate that there had been a choke in this loft at some time preceding the explosion. On the working floor, or the first floor above the basement, it was observed that the door at the front of loft No. 10 had been opened but it was evident that this was opened before the explosion occurred as it had been slid up, showing that it had been opened manually and had not been blown open by the force of the explosion. The opening was filled with portions of the elevator belt which had dropped.

On the floor around this opening there was considerable grain spilled, in fact, to a depth of about 18 inches near the opening, and to a distance of six or eight feet away from the opening. This grain was covered with various sized pieces of broken concrete and other debris which had evidently fallen on it following the explosion. In fact, in cleaning up this grain or in digging down into it, it was found that there was no debris underneath it, which would indicate that this grain had all spilled out on the floor before the explosion occurred.

In examining the various lofts, it was observed that the belts in only lofts No. 8 and No. 10 had been at all burned or affected either by explosion or fire. In the case of loft No. 8 it was found

the opening of this door indicated that there was a greater force in the top of loft No. 10 than in any of the other lofts.

In going to the switch room on the working floor, it was found that the switch operating the motor which drove loft No. 10 had been blocked so that it could not be used. This would indicate that at some time preceding the explosion there had been some trouble with this motor and this switch blocked so that it could not be operated until this trouble had been taken care of.

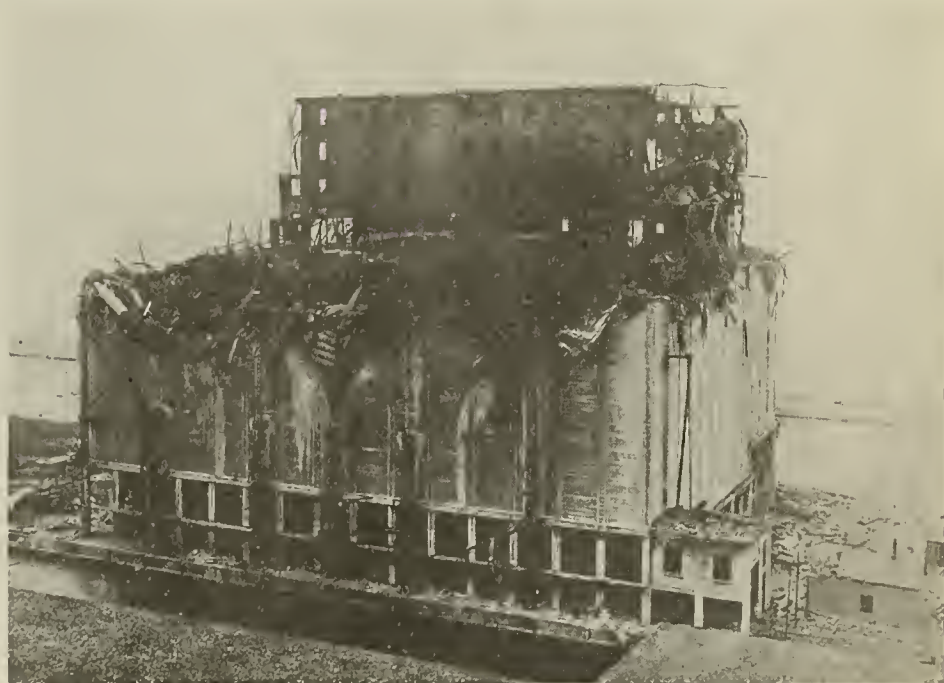
## THEORIES ADVANCED

On account of the heating of the motor and of the known presence of fire in the dust on the rotor of this motor operating loft No. 10, and on account of this fire having gotten into the small pit below the motor, it was thought by some that this hot motor or this fire in the dust was the direct cause of the explosion.

However, it does not seem that this could have been in any way the cause of the explosion since this motor was hot and this fire was present there 10 minutes before 12, at a time when the plant was in operation and several streams of grain were running so that there would have been a more dusty condition in the atmosphere around the motor at this time than there would have been between 12 and 1 o'clock, during the dinner hour, or at any time between one and the time of the



VIEW OF SOUTH SIDE OF ELEVATOR AFTER EXPLOSION



VIEW OF EAST SIDE OF ELEVATOR AFTER EXPLOSION

damaged. A large portion of the steel superstructure was, however, badly twisted and bent.

Large pieces of reinforced concrete from the upper portion of the plant were carried a considerable distance away from the plant, in some cases more than 150 feet. The office building for the elevator was located at a point about 100 feet north of the plant and the front portion of this was entirely destroyed, being crushed in by falling steel and reinforced concrete from upper part of elevator.

At the time of the explosion a barge was being loaded with grain in the slip on the east side of the plant and debris which was thrown on to this caused it eventually to sink, together with 53,000 bushels of grain which it carried at the time.

Because of the fire resistive construction of the plant, which was built entirely of steel and reinforced concrete, the fire loss following the explosion was almost negligible; in fact, this fire was so small that there was practically no evidence of anything having been destroyed by fire, with the exception of the conveyor belt leading to loft No. 8 and the elevator belts in lofts No. 8 and No. 10.

## DEVELOPMENTS DURING INVESTIGATION

In the basement it was observed that most of the windows that had been broken were not blown out by the force of any explosion in the interior of the building, but the glass from these broken windows was found to be strewn over the floor of the basement, indicating that they had been broken in, or in reality sucked in, by the vacuum which was formed following the explosion.

A large quantity of grain had spilled out of the

that there were three elevator buckets on the top of the head pulley, while in loft No. 10 there were no buckets on the top of the head pulley. Providing that either pulley had not been turned since the time of the explosion, or shortly preceding it, this fact would indicate that the belt in loft No. 8 burned while in its regular operating position, while the belt in loft No. 10 became weakened at some point, burned in two at the top of the loft and the belt parted and dropped down in both legs from this point.

In examining the piles of buckets which were found in the bottom of lofts No. 8 and No. 10, it was found that there was considerable debris on top of the buckets in loft No. 10 while there was practically no debris on top of the buckets in loft No. 8. This would also indicate that the belt operating in loft No. 10 had dropped preceding the explosion, since if it had dropped after the explosion, this debris would have fallen into the bottom of the well and the buckets would have fallen on to it, thereby covering it, rather than this debris falling on top of the buckets.

In the top of each of the lofts there was a small sheet iron door hinged at one end and held closed with a turn knob at the other end. These doors on all the lofts except loft No. 10 were found closed. The door on loft No. 10 was thrown open and bent in a position which would indicate that the door had been forced open by pressure from the inside. The knob which normally held this door closed was found in the position in which it would normally be to hold it closed. The position of and

explosion, since there was no grain running during this period, except one small stream from one of the garners onto a conveyor which carried it to a spout leading to the barge. This would not have created any dust in that portion of the plant where this motor is located. It would, therefore, seem that this could not have been a possibility.

Another possibility which was considered was that the explosion might have occurred in the basement as a result of the heating of the belt driving the belt conveyor running to the boot of loft No. 10. It was reported that this became hot at the time of the choke in loft No. 10, and that the odor of burning rubber was quite strong in the basement. However, this could not have been the cause of the explosion, for if it had been, it is probable there would have been more evidence of fire at this point and this belt would probably have been badly burned, which was not the case.

Also, if the explosion had started in this portion of the plant, it would have been difficult for it to have propagated from there up into the upper portion of the house above the bins, except possibly through the shaft in which the hoist was operated. If the explosion had started in the basement it would seem that there would have been considerably more damage in this portion of the plant than was evident. There could not have been a very great pressure in the basement since the windows were drawn in by the vacuum instead of having been blown out by any strong pressure.

Due to the fact that the conveyor belt in the

(Continued on Page 709)



## HANDLING BULK GRAIN IN THE WEST

Years will elapse before sack handling of grain will have been eliminated on the Pacific Coast, according to the recent Report on the Grain Trade by the Federal Trade Commission. This seems almost incredible in view of the material saving which bulk handling offers. The terminals at Pacific ports are becoming adequately equipped to handle all the bulk grain offered. In the Northwest, Seattle, Tacoma, Portland and Astoria have splendid new elevators; San Francisco has the Sperry Elevator at Vallejo and Oakland will soon have one in operation.

Some of the advantages of bulk handling were recently presented by George R. McLeod, head of the Agricultural Department of the Sperry Flour Company, in *Pacific Farm Progress*, published by the California Corrugated Culvert Company of Berkeley. Mr. McLeod says:

A movement to handle California grain in bulk was started in the early part of 1916. A meeting was called at Sacramento by the Sacramento Valley Development Association for the purpose of considering the handling of grain in bulk. Among those present at this meeting were the late T. C. Friedlander, then secretary of the Merchants' Exchange of San Francisco; H. C. Bunker, chief grain inspector; numerous warehouse operators; representatives from the mills and a few farmers from various parts of the state. Several subsequent meetings were held at Stockton and Sacramento.

With the possible exception of Mr. Jennings, who farms in a large way near Tehachapi, no farmer

the largest of these were the ones built by Moreing Brothers on the Sacramento River, about 10 miles above Sacramento, where they have two sets of

wheat has been rather slow, a large proportion of the grain growers in California realize that it is much the cheaper way of handling wheat or barley.



UNLOADING BULK GRAIN FROM FREIGHT CARS AT SPERRY PLANT

transfer bins for transferring the grain from their 20,000-acre ranch to barges on the river. Others were built at Chowchilla, Athlone and Le Grange.

One of the arguments against bulk handling four or five years ago was the fact that there were no terminal elevators equipped to take care of the grain at tidewater points. The growth of these elevators has been slowly developing, however, and without a doubt if the farmers are equipped to handle and ship grain in bulk a way will be found to transfer in bulk what grain is shipped to seaboard points.

The fact that grain has to be handled so many times between the fields and the mills or at seaboard puts quite a handicap on the farmers who sack their grain. One of the heaviest items is leakage. After the wheat comes from the harvester it is sacked and dumped on the ground. A certain percentage of the bags burst or tear and there is a percentage of loss in the field. There is leakage again in the warehouse in transferring from the barge or truck and also a certain amount of leakage in transferring from the warehouse to boat or rail. Leakage also occurs when it is transferred from rail to mill or to steamer at sea points.

Actual figures show that the leakage on 25,280 sacks of wheat, weighing 3,296,305 pounds transferred from steamer to barge and from barge to mills amounted to 26,008 pounds, while a like amount transferred by the bulk system did not exceed 1,500 pounds loss.

The cost of handling begins as soon as the grain is threshed. Sowers and sack tenders are eliminated by the bulk method. One man with a truck can haul as much grain to the warehouse as 10 men can handle by picking up sacks from the ground. One man at an elevator can handle as much grain with machinery as 10 men can by the sack method.

Considering the innumerable transfers necessary on a large percentage of the grain grown, the cost of labor amounts to from \$1 to \$3 per ton more in handling sacked grain than by the bulk method.

Sacks are another item and, although they do not amount to as much as leakage, or the cost of handling, it is an unnecessary expense that amounts to all the way from \$1 to \$2 per ton. At first glance one would say that the cost would amount to more than this, but as it is the custom to allow a price for bags, over and above the price of grain, the farmer practically receives two-thirds the value of his sacks back when disposing of his grain.

Another saving feature is that when grain is handled through an elevator the screenings contained in grain can be removed and used at home. In some cases this amounts to considerable and handling charges and freight are eliminated also.

There is no question but that the grain farmer who cultivates a reasonable acreage of land would



MARINE LEGS, SPERRY FLOUR COMPANY'S ELEVATOR AT VALLEJO

was in a position to give any information regarding the harvesting and marketing of bulk grain in California.

Committees were named and several meetings were held during that year, which resulted in the building of four or five small elevators equipped to handle grain direct from the harvester. Among

A small proportion of the grain in California began to move in bulk. A few elevators and bins have been built since that time, some being small structures for use on the farms. The largest one has a capacity of 50,000 bushels and was erected by Andrew Kaiser, who farms near Hamilton City.

While the development of this manner of handling



save a considerable amount, over a term of years, by building his own elevator at home. Many California grain farms are large enough to warrant the building of a private elevator for their own use.

Good roads touch nearly every part of the state where grain is raised and on this account the crop could be marketed at nearly any time of the year and there would be a storage saving. There would be a gain in weight if the grain was carried into the fall and winter season and in many instances a saving in taxes could be made. At the present time many farmers in this state are obliged to store their grain in warehouses in the cities and are assessed for municipal and other special taxes, whereas the grain would not be subject to these taxes if it were stored on the farms where it was harvested.

The last argument in favor of bulk handling is that 80 per cent of the wheat in the United States is handled in bulk and it is only on account of custom that we are clinging to the costly method of harvesting in sacks, as we in California are better situated to handle grain in bulk on account of the manner in which we harvest and the convenience of good roads.

## THIS SOUNDS PRETTY GOOD

You have read President Harding's Inaugural Address, but the following extracts are well worth reading again. There is hope and encouragement in every line.

"Our supreme task is the resumption of our onward normal way. Reconstruction, readjustment, restoration—all these must follow. I would like to have them. If it will lighten the spirit and add to the resolution with which we take up the task, let me repeat for our nation, we shall give no people just cause to make war upon us. We hold no national prejudice, we entertain no spirit of revenge, we do not hate, we do not covet, we dream of no conquest, nor boast of armed prowess.

"A regret for the mistakes of yesterday must not, however, blind us to the tasks of today. War never left such an aftermath. There has been staggering loss of life, and measureless wastage of materials. Nations are still groping for return to stable ways. Discouraging indebtedness confronts us like all the war-torn nations, and these obligations must be provided for. No civilization can survive repudiation.

"We can reduce the abnormal expenditures and we will. We can strike at war taxation and we must. We must face the grim necessity, with full knowledge that the task is to be solved, and we must proceed with a full realization that no statute enacted by man can repeal the inexorable laws of nature. Our most dangerous tendency is to expect too much of government and at the same time do for it too little.

"We contemplate the immediate task of putting our public household in order. We need a rigid and yet sane economy, combined with fiscal justice, and it must be attended by individual prudence and thrift which are so essential to this trying hour and reassuring for the future.

"The business world reflects the disturbance of war's reaction. Herein flows the life blood of material existence. The economic mechanism is intricate and its parts interdependent and it has suffered the shocks and jars incident to abnormal demands, credit inflations and price upheavals. The normal balances have been impaired, the channels of distribution have been clogged, the relations of labor and management have been strained. We must seek the readjustment with care and courage. Our people must give and take. Prices must reflect the receding fever of war activities. Perhaps we never shall know the old level of wage again, because war invariably readjusts compensations and the necessities of life will show their inseparable relationship, but we must strive for normalcy to reach stability. All the penalties will not be light nor evenly distributed.

"There is no way of making them so. There is no instant step from disorder to order. We must face a condition of grim reality, charge off our losses and start afresh. It is the oldest lesson of civilization. I would like government to do all it

can to mitigate them. In understanding, in mutuality of interest, in concern for the common good our tasks will be solved.

"No altered system will work a miracle. Any wild experiment will only add to the confusion. Our best assurance lies in efficient administration of our proven system.

"The forward course of the business cycle is unmistakable. Peoples are turning from destruction to production. Industry has sensed the changed order and our own people are turning to resume their normal onward way. The call is for productive America to go on. I know that Congress and the administration will favor every wise government policy to aid the resumption and encourage continued progress.

"I speak for administrative efficiency, for lightened tax burdens, for sound commercial practices, for adequate credit facilities, for sympathetic concern for all agricultural problems, for the omission of unnecessary interference of Government with business, for an end to Government's experiment in business and for more efficient business in Gov-

ernment administration. With all of this must attend a mindfulness of the human side of all activities so that social, industrial and economic justice will be squared with the purposes of a righteous people."

us by the magazine *Concrete*, of Detroit. It certainly exemplifies their specialty.

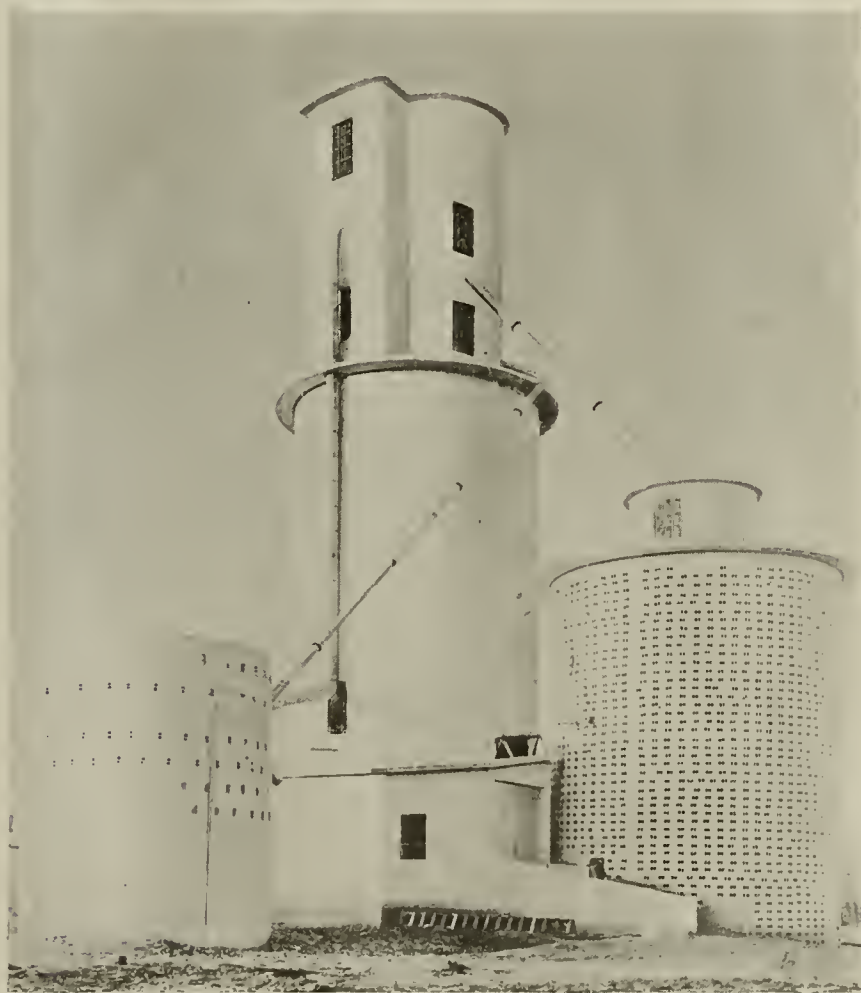
The plan of the house is as attractive as its structure is substantial. The house is 30 feet in diameter. The bins are 60 feet deep and the cupola rises 32 feet above the tanks. Under the whole structure is a basement 7 feet 6 inches deep. The house has two elevator legs with steel boots and steel heads. The equipment consists of automatic scales; Western Sheller fed by chain drags; Western Gyrating Cleaner; two B. S. Constant Self-locking Dumps. Power is furnished by electric motors with Morse Silent Chain Drives.

The ear corn storage is 30 feet in diameter and 40 feet high, with cupola 12 feet in diameter and 9 feet high. The capacity is 10,000 bushels divided among four bins. Ventilation is furnished by having a circular well the full height of building in center, with building tile set in the concrete of the outside walls and also in walls of well. Corn is conveyed from the ear corn storage to the sheller in basement through a tunnel by means of a chain drag. Corn is delivered to the ear corn storage from the main elevator by gravity spout.

A concrete cob burner 18 feet in diameter and 27 feet high was built in connection with this plant. The plant was equipped to load ear corn from ear corn storage direct to cars, and is one of the best arranged and equipped elevators of its size in the

## AN ALL CONCRETE PLANT

The Farmers Cooperative Elevator Company of Farmersville, Ill., believes in concrete. When the company was formed in 1919 and the erection of a plant was considered, this most permanent of building material was selected without dissenting voice, not only for the elevator itself, but for the corn crib and the cob burner as well.



PLANT OF THE FARMERS CO-OPERATIVE ELEVATOR COMPANY, FARMERSVILLE, ILL.

## THE GREENBUG MENACE

Green bugs are reported by specialists of the United States Department of Agriculture to be extraordinarily abundant in the principal Winter wheat producing counties of Texas, especially in Denton, Wise, Montague, Cook, Collin, and Grayson Counties. The infestation also extends westward to other counties where Winter wheat is grown. Severe injury to this crop in the infested regions now seems inevitable. Mild Winter weather favors the multiplication of the green bug, and permits it to become so numerous that its parasitic enemies are unable to hold it in check. If the present mild weather should continue for the remainder of the winter and the spring should prove to be a cold, backward one, green bug injury may extend northward through Oklahoma and Kansas and the Mississippi Basin, resulting in widespread and disastrous injury to Winter wheat and oats.

No satisfactory remedy for the green bug has been discovered, but where small invasions are recorded the areas or spots affected should be plowed under





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#### ADVERTISING.

This paper has a large circulation among the elevator men and grain dealers of the country, and is the best medium in the United States for reaching persons connected with this trade. Advertising rates made known upon application.

#### CORRESPONDENCE.

We solicit correspondence upon all topics of interest connected with the handling of grain or cognate subjects.

Official Paper of the Grain Dealers National Association and of the Illinois Grain Dealers Association

CHICAGO, ILL., MARCH 15, 1921

### DUPLICATING GRAIN MACHINERY

PLANS submitted by the Committee of Seventeen of the American Farm Bureau Federation, for a complete grain marketing system, offers nothing new in the economic handling of grain, nor does it give any promise that the farmer will be one cent better off for the effort.

We have heard much from promoters and politicians of superfluous middlemen, and yet the Committee's plan duplicates every agency now in existence and adds to them a finance corporation, an export corporation, and a service department, the functions of which are now well taken care of by our banking system, our exporters and our board of trade statisticians. If there is anything economically wrong with the present system the report of the Committee does not show it. No agency is done away with; no step in the marketing process is shortened.

From the country elevator to the exporter or miller there is at present the sharpest kind of competition. Improvement in country roads and multiplication of country elevators has made it necessary for every elevator manager to give the best service and the best terms possible to get business. On every terminal market are dozens of commission men fighting for every car of grain shipped in that direction. Millers have time and again bid up the price of cash grain above the current market price. Brokers and exporters are hustling for business. All are in competition, and competition is the only agency ever devised that can reduce the cost of service.

Over against this system the Committee

## THE AMERICAN ELEVATOR AND GRAIN TRADE

Thirty-Ninth Year

proposes to set up another exactly like it, except that all its agents will be paid helpers, without more than their salary interest in efficient management, and probably in many cases without the experience, initiative and foresight to safeguard their patrons' interests. Since when has hired help proved more efficient than owner's oversight? The plan is doomed to disappoint a great many farmers who will look to it to solve all their problems and answer all their complaints. But it will create many jobs for the promoters and their friends.

### POOLING WHEAT

PROPOSERS of the Sapiro pooling system are making rapid headway in the grain states if we may judge from their public utterances as quoted in the press. In the Pacific Northwest, 15,000,000 bushels of wheat is pledged to the wheat pool; Kansas promises 50,000,000 bushels; Minnesota and the Dakotas are working on the plan and the leaders promise surprising results, in fact the aim of the promoters is to secure entire control of at least 50 per cent of the wheat crop of the country.

According to the promotion plans, the present marketing machinery will be junked. There will be no use for boards of trade or other agencies. Just how the buyers and sellers will be brought together does not appear; perhaps by a classified ad in a newspaper. At least the plan has this much originality, which is more than can be said of that of the Committee of Seventeen. However, it is one thing to create a monopoly on prunes, and quite another to do it with wheat. That is one of the things the promoters have to learn.

### INVITING TROUBLE

CONCRETE has much in its favor as a building material, but it has one serious defect: Its use gives the elevator owner such a sense of security against fire that he overlooks precautions that should be maintained in every elevator, regardless of material. The dust explosion hazard is always present, and is even greater in a concrete than in a frame or ironclad house.

The reasons for this are twofold, and are brought out forcibly in the communications in this issue relative to the article by David J. Price last month. The first reason is carelessness. The operator is lulled to a false security by his so-called fireproof plant. Second, the solidity of construction and lack of ventilation in a concrete building present a resistance to an explosion which greatly augment the destruction. Exploding grain dust is as potent as dynamite and as disastrous in its effect. The strongest structural iron or concrete work is wholly unable to stay its force.

In building a concrete elevator, therefore, the dangers of this type of building should be considered as well as its advantages, and the safeguards which Mr. Price suggests should be carefully incorporated in the plans of the building and in the rules for operating

it. That these articles are timely is amply proved by the fact that the majority of concrete elevators do not contain the proper safeguards and in their present state are a constant menace to life and property.

### RAIL RATES TOO HIGH

INCREASED freight rates were granted last fall before the tide of industry and prices had started the ebb which has been so marked in the past six months. At peak prices and rapid turnover of commodities, the country would have borne the increase without much complaint, but under present conditions the excess freight rates and passenger fares have been a burden which has hastened the decline and upset the calculations of those who made the rates, for revenues have declined and many commodities cannot be shipped at all and meet the buyers' market which prevails.

This condition has been particularly noticeable in the hay trade, but is almost as impossible for grain. In many cases corn and oats rates to a possible consuming market are greater than the grain brings on the farm. The framers of the railroad rate schedule had no thought that rates would double the cost to the consumer, and there must be and will be an early adjustment.

The roads have but one source of revenue, freight and passenger rates. Their chief operating expenses are in labor, coal and materials. The cost of all of these must be materially reduced or the roads cannot operate at lower rates. The rail brotherhoods are threatening strike if wages are reduced; the steel companies say that lower steel prices will come only gradually; and the coal mine operators cannot see how their commodity can be lowered in price, although it is still about three times prewar price.

Final adjustment may be some distance off, and then only after a costly struggle, but there can be only one end to the matter and how much better that all should accept their share of the decreased profit which will lead to more normal conditions.

### IT'S IN THE RULE BOOK

THE volume of 388 pages on "Arbitration Decisions" which has just been issued by the National Association, recalls the many appeals that have been made to dealers to become more familiar with the trade rules. The majority of grain shippers do not know these guide posts, and yet the validity of every trade may be influenced by its conformity to or divergence from these rules, which are the result of the application of common sense and fundamental law to trade practice over a long period of years.

In the volume mentioned above, the rules which were most often called upon to settle disputes were: Rule 7, in eight cases; Rules 4 and 26, in six cases each; Rule 5, in four cases; Rule 6, in three cases; Rules 14, 28, 29 and 38, in two cases each; and most of the others in at least one case.

There were 41 disputes over contract terms or meaning; 36 in which the time ele-



ment was the determining factor; 29 which originated over the draft; 35 on acceptance; 27 disputes as to shipment; and 25 over the failure of one of the parties to fulfill a part of the contract.

A cursory examination of the decisions shows how many pitfalls there are for the uninformed dealer and is a potent argument for a closer study of the rules, which in many cases would save large sums of money. Hundreds of dollars have been at stake in many instances, and often without any necessity. An evening or two spent with the trade rules would be about as good an investment of time as we know of.

## FARM LOANS CONSTITUTIONAL

**W**HEN the United States Supreme Court decided that the Farm Loan Act is constitutional it paved the way for the relief of country banks who have more frozen credit in the shape of farm loans than they can handle. The opinion has been quite generally expressed that the farm loan privilege would make it easier for the farmers to hold their grain for speculative purposes, and that they would take advantage of it.

We believe the decision will have the opposite effect and that farmers will be more liberal in their grain releases than they have been in the past months. The farmers are like the rest of us, they don't like to be forced into an act, and they are a little more stubborn in resisting when they think coercion is being used. But they don't like a debt any more than the rest of us and many will be willing to accept a loss rather than jeopardize their banking credit further, so long as they feel that there is no real or fancied principle at stake. The Farm Loan Act, with its provision for tax free bonds, will provide a great amount of credit for farmers. It is a good law and should be taken advantage of, but not to speculate.

## THE TARIFF VETO

**T**HERE was no surprise in the vetoing of the Farm Tariff Bill, one of the last acts of President Wilson's administration. As a matter of fact it was passed only with the understanding that it would be vetoed. The bill was clumsy and without balance, and was devised simply as a political measure to quiet the clamor of the farmers for protection.

No one questions that the farmers have suffered during this crop by the drastic declines. Many of them have been ruined; likewise our millers grinding domestic spring wheat have found competition all but impossible against Dominion millers or users of Canadian wheat, with exchange more than 10 per cent in their favor. But our wheat imports bear such a low relation to our exports that we must believe that Canadian grain had very little to do with the recession in grain values. It would have come had the Farm Tariff Bill been in effect.

On the other hand the measure would have been a great handicap to the thorough revision of the tariff question, which promises to

be one of the first works of the new Congress. We will have to accept payment of our foreign loans and interest in merchandise or cancel the obligations. In the tariff adjustment necessary to permit payment without allowing dumping of cheap merchandise to the detriment of our own industries, there is a problem which will tax the statesmanship and business vision of Congress. It must be done without the bias of politics and without consideration of class interest. It is a problem for America by Americans.

## OUR GRAIN SUPPLIES

**M**ARCH 1 supplies of grain in the country are important indications of what we may expect during the balance of the year. They dovetail into the new crop condition reports which soon follow, and are of value alike to dealer and grower. Everyone knew that there were large supplies in the country and the markets had about discounted this knowledge before the reports on March 1 were issued. The Government report estimated corn on farms 1,572,397,000 bushels or 48.6 per cent of the 1920 crop, against 1,070,677,000 bushels or 37.5 per cent of the 1919 crop.

The amount of wheat on farms was 207,591,000 bushels or 26.4 per cent of the 1920 crop, against 164,624,000 bushels or 17.6 per cent of the 1919 crop. Oats showed 689,566,000 bushels or 45.2 per cent of the crop, as against 418,983,000 bushels or 34 per cent last year. Barley was 69,836,000 bushels or 34.6 per cent, compared with 36,848,000 bushels or 22.8 per cent last year.

Last year there was more wheat at this time in the country mills and elevators and in the visible supply (173,000,000 bushels) than there was on the farms (165,000,000 bushels) while this year wheat in store in country and visible is only 112,000,000, compared with nearly 208,000,000 bushels on the farms. This reflects the "Hold your wheat for \$3" campaign, and there is no need to comment on the futility of trying to break natural laws.

The Government figures are considerably in excess of private estimates, which may be found on another page, and only 18,000,000 bushels less than a year ago when there was a carryover of 150,000,000 bushels.

## BUILD ROADS NOW

**A**LMOST every state in the Union has large appropriations for the building of roads, and yet there has been little activity in that direction. Bids for road building have been called for again and again, only to be rejected because they were too high. This, of course, is good business, under ordinary conditions; we could have stood more of it in the past two years, but there is grave doubt as to the advisability at this time of haggling over a price within reason, when all factors are considered.

There are thousands of men out of work. The majority of them have not grasped the fact that the labor market must be liquidated, but enough would listen to reason to make a

substantial start. To employ these men would be worth a great deal to the state. The railroads are in a position to haul building material in any quantity, and the cheapening of road haul costs for farm products would more than make up the excess cost of construction.

Only within recent years, since the advent of the motor truck, in fact, has the road haul been computed in marketing cost for farm products, but Government figures show that it is a material part of that cost and falls directly upon the farmers. Good roads not only cheapen actual hauling, but they also widen the farmer's market and make him independent of any one station. The benefits are too patent and the need too urgent to warrant any unnecessary delay in the building of good roads.

## FRED SAID SOMETHING

**F**ROM the well known "Red Letter" of J. F. Zahm & Co., the product of Fred Mayer's genius, the following excerpt is worth thinking over:

We haven't a bad liver, nor are we dissatisfied with the world at large.

We cannot refrain however, from grumbling at some of the statements sent over the wires by fellows we regard as "high ups" in the grain trade. Allow us to quote some we've seen lately: "I have information that I cannot reveal which I believe will result in a bad break." Another: "This wheat is the stuff with the wind in it." Still another: "When this wheat starts to break it'll be like a ball—go down so fast no one will be able to catch it."

Is it any wonder, with predictions worded as those above, that the buyer of grain, flour and other things hesitates?

We don't care whether grain sells higher or lower but let's cut out the "rough stuff" boys.

This is the sort of thing that has given the grain exchanges a black eye and has destroyed the confidence of many people. It sounds more like the patter of race track touts, than responsible utterances of responsible firms. Perhaps business men demand jazz in their communications, but in the best (or worst) jazz one can hear a strain of music along with the rumble of the bass drum.

## TRANSPORTATION TAX REPEAL

**R**EPRESENTATIVE Longworth of Ohio introduced a bill in the last legislature for the repeal of the transportation tax, and has declared his intention to introduce it again at the next session of Congress. The transportation taxes on freight, passenger fares and Pullmans amount to about \$282,000,000, but they have caused more trouble and complaint than almost any other source of Federal revenue. We make an exception of the income and profits taxes.

There have been uncertainty and conflicting decisions in regard to the freight tax from its inception, and while the grain trade would be glad to be free from this adjunct to an already excessive freight charge, the irritation and trouble has been more objectionable than the actual cost. We hope Mr. Longworth carries through his intention at the earliest possible opportunity and that his bill will receive the support it deserves.



## EDITORIAL MENTION

March 4 is behind us. Let's tighten our belts and go ahead.

Low grain prices put a premium on farm economies. Every grain dealer should be a booster for clean seed. Perhaps it will mean a job for him as well.

Has anyone a job for a former investigator of the Federal Trade Commission? If we read President Harding's thought correctly most of them will be looking for work.

We can't expect President Harding to revolutionize business conditions in a day, but isn't the silver lining showing up stronger on the clouds since March 4?

North Dakota's finances are getting an amount of publicity which would have been nectar to Mr. Townley a year or two ago. Just now the draught has a bitter flavor.

Prospect of further trouble between the Allies and Germany over the reparation question affected wheat prices materially. The market is so cagey that mere rumor is upsetting.

The Department of Agriculture has developed a grain sample bag made of duck which is said to be practically waterproof. A bag of this sort is much to be preferred to some of the containers used in forwarding grain samples.

The value of the St. Lawrence deep waterway is slowly making new converts. Even in New York there are occasional individuals who see the light. But the deep waterway is coming in spite of New York and the Vanderbilt railroads.

Russia has dropped out of all wheat production and requirement statistics. Latest reports from that unfortunate country indicate that it will be an importer of grain rather than an exporter, and that some years must elapse before it takes its former place in the surplus column. Rumors of renewed business relations will be bullish.

Canadian farmers are going slowly in the attempt to organize a wheat pool. They have quite a marketing machine already organized, too. But American promoters would favor the pool overnight, set up their marketing machinery the next day, and sell the crop on the day following. We can learn something from the slower and surer methods of our neighbors.

Two news stories of the same date came to us recently. One states that North Dakota had 17,784,000 bushels of wheat on the farms, according to the March report of the Bureau of Crop Estimates. The other report stated that there is no Spring wheat planting in western North Dakota because the farmers

have no wheat to plant and no money to buy it. North Dakota is a big state and no doubt many farmers lack seed wheat and money, but we predict that the state will seed an average acreage nevertheless.

A strong drive has been started in the South to reduce cotton acreage by 50 per cent, and to that extent increase the acreage of food and feed crops. No step has ever been taken better designed to improve the economic condition of the South.

The Supreme Court of Montana has declared unconstitutional the bill providing for a bond issue to build a state terminal elevator. The bonds had already been offered for sale, but found no buyers. The court saved Montana an expensive experiment.

Judge Gary of the Steel Corporation, in a public statement made after the receipt of the note from John Skelton Williams in which the Corporation was accused of profiteering, replied to everything except the charges made. We are still waiting to hear why steel prices do not come down.

In our last issue, in the story of the new Dewein-Hamman Elevator at Decatur, Ill., we stated that D. M. Cash would have charge of the Cairo office of the firm. This was a mistake. The company does not contemplate a Cairo office at present, and Mr. Cash will have charge of the office at Decatur.

Senator Capper declares that he will reintroduce his anti-option trading bill in the next Congress. That will mean that the grain trade will have to put on another educational campaign, wasting their own and the senator's time. But no doubt Mr. Capper would ask, "What's time to a senator?"

It is estimated that the Government Hospital Elevator at Moose Jaw, Sask., has saved \$3,000,000 for the farmers of that province since it was constructed. A "hospital" elevator is simply one with cleaning and drying facilities. The savings were made on freight which would have been paid for screenings, the value of the screenings themselves, and the better grade on arrival at the head of the lakes of dried grain.

President Harding's promise of "more business in government and less government in business," has met enthusiastic endorsement throughout the country from everyone except members of state legislatures. They are still obsessed with the idea that every temporary ailment, economic or physical, can be cured by legislation. Assemblymen, apparently, have ears only for the chronic kickers, never for the great silent majority.

There has been considerable talk of advancing Germany a credit of \$1,000,000,000, secured by the property held by the Alien Enemy Custodian. France made an advance to Germany for improvements in the Ruhr Basin so that its coal indemnities could be made promptly. Now France claims that the

money advanced was not used in the coal fields, but to pay English and Belgian claims so that trade could be restored with those countries. If this report is true we should look well to the securities, even if the loan would open up an outlet for grain and meat products.

The Canadian Wheat Board states that Canadian wheat last year sold for about 25 cents per bushel more than that of the United States. That is just about the difference in the exchange value of Canadian and American dollars, so the statement is doubtless correct. Canadian and American wheat are on a parity, other things being equal.

No one doubts the authority of P. G. Holden, of the International Harvester Company, when he speaks of corn, so it is well to heed his statement that much of the seed corn saved from the last crop did not dry out thoroughly and is therefore low in germination. Seed from the most promising looking ears should be tested before planting.

The Minnesota lower house has passed a bill which its proponents declare will provide for hedging but will eliminate gambling in grain. If they have succeeded in doing that they have accomplished what the best minds in the grain trade have been striving for for years. About a week ago Julius S. Barnes told the Minnesota legislators that it couldn't be done. But doubtless they know more about the grain trade than Mr. Barnes.

The returns from a recent questionnaire to the co-operative elevators of the country disclosed that the operators who made a practice of hedging handle wheat on a 6.8 cent margin; while those who did not hedge required an average of 8 cents. If there is so much difference in merely taking advantage of the hedging facilities imagine what it would be if there were no such facilities. The spread would be nearer 20 cents than 6.8.

It is estimated that \$500,000,000 will be spent for motor trucks this year. Without doubt a considerable part of this amount will be used in buying trucks when horses could be used more economically for the work intended. To prevent this waste the Horse Association of America is organized, and is doing a great work. As an adjunct to the railroads and to supplant l. c. l. freight the motor truck is indispensable, but for many uses the horse cannot be surpassed.

Kansas is promoting a Warehouse Bill which provides that, "Every local public warehouseman shall receive for storage and shipment, so far as the capacity of his warehouse shall permit, all grain in a suitable condition for storage tendered him in the usual course of business, without discrimination of any kind." Under certain conditions every elevator in the state would become a storage warehouse with no chance to do a shipping business. Fortunately it will not be compulsory to take out a warehouse license, and we imagine that few Kansas operators will do so.





C. M. WOODWARD  
Kansas City, Mo.

## NEWS OF THE TERMINAL MARKETS



DAN MULLALLY  
St. Louis, Mo.

### FARMERS WANT CONTROL

The agricultural bill, passed by the lower house of the Missouri State legislature recently, contained a provision that the state's grain inspection department be under the direct control of the State Board of Agriculture.

### NEW OFFICERS AT DULUTH

H. F. Salyards was chosen as head of the Duluth Board of Trade, Duluth, Minn., at the recent annual meeting of that organization and G. H. Spencer, vice-president. Chas. F. Macdonald, who has so ably filled the position of secretary and treasurer for years past, continues in that office.

### H. C. CARSON HEADS BOARD OF TRADE

The annual election on the Detroit Board of Trade held early in March resulted in the choice of H. C. Carson for president; R. L. Hughes, first vice-president; W. R. Jossiman, second vice-president. Board of Directors: A. S. Dumont, F. W. Lichtenberg, Frank T. Caughey, Gerald Hulett, Theo. W. Swift, Fred W. Blinn, H. B. Simmons, C. R. Huston.

### ELECTION AT LITTLE ROCK

At the annual meeting of the Little Rock Grain Exchange, Little Rock, Ark., held February 24, officers and directors were elected as follows: Hal K. Cochran, president; Guy Williams, vice-president; August Probst, secretary and treasurer; G. J. Vizard, traffic manager; J. F. Mueller, chief inspector and weigher.

Directors: John F. Weinmann, F. Kramer Daragh, E. L. Farmer, Geo. E. Cunningham, C. L. Gordy.

### RECEIPTS SMALL

Premiums on the better grades of cash feeds have been well maintained during the week, although the demand has not been especially urgent. Low grades were slow sale. No. 3 Yellow corn traded through the entire week at 9 cents under Chicago May, No. 4 and No. 5 at 12 and 14 cents under. Number 3 White oats sold at 3 cents under Chicago May oats. The receipts of all grains for the week have been very small. Most of the wheat is coming from Canada. Do not expect there will be any material change in receipts until after the opening of navigation on the Great Lakes.—*White Grain Company, Duluth, Minn. Market Letter of March 12.*

### CASH GRAIN AT ST. LOUIS MARKET

Receipts of wheat in this market for the past month have been under expectations and have in a measure helped the cash demand. Millers have been small buyers, taking only as their pressing needs demanded, in order to keep running two or three days each week.

Cash wheat is lower as the result of this recent break in the options. We do not expect much price change from now on. We strongly advise our customers to sell cash wheat and buy the May.

Corn has had a good run which was forced on account of moving time and March 1 settlement, but is now about over and we doubt very much if we will get another run of corn until May. While stocks are ample the farm feeding value is higher and the present price discounts a whole lot of so-called bearish conditions. St. Louis stocks are low and after this run the demand will force this market well to the front.

The demand for oats continues although prices are controlled by the movement of corn. Stocks in St. Louis are light and prices are about 2 cents

higher than at surrounding markets. Consumers are buying in a conservative manner. We think present prices fully discount any bearish conditions that exist. Buyers are discriminating more than usual in the buying of bin burned oats.—*Elmore-Schultz Grain Company, St. Louis Mo. Market Letter of March 12.*

### L. L. WINTERS

The history of L. L. Winters, director of the Chicago Board of Trade and member of the firm of Hulburd, Warren & Chandler of Chicago, opened in that city March 3, 1873. On that date he first saw the light on the North side and after finishing with the Public and the High School embarked in the real estate business which was followed in July, 1899, by a position with the old firm of Finley Barrell & Co., one of the prominent Chicago grain houses. Later he went with C. E. Gifford & Co., and in 1904 became connected with R. G. Chandler.



L. L. WINTERS

He remained with him during and after the consolidation the following year with Hulburd, Warren & Co., under the firm name of Hulburd, Warren & Chandler.

Immediately after this consolidation Mr. Winters went to Minneapolis, where he represented the firm on the Minneapolis Chamber of Commerce until 1915 when he was admitted to partnership in the company and returned to Chicago.

Mr. Winters represents the company daily "on 'Change" and is the author of the firm's market letters. These letters are noted for clearness, force and accuracy of statement and are widely quoted in all market centers. He has his home in Highland Park, possessing a charming wife and four children, and is a member of the Highland Park Club and the Exmoor Country Club. Besides being a director of the Chicago Board of Trade he is a member of the Publicity Committee and has served on various Board of Trade committees during his membership.

Mr. Winters admits to the possession of two hobbies; one, the study of English literature, and the other the cultivation of his garden and his flowers. While at Minneapolis he lived outside the city and operated a farm on a small lake so that in writing upon subjects pertaining to agriculture he speaks with authority. In his extensive library are the complete works of such masters of English prose as Hazlett, De Quincy, Macaulay and, in short, the most brilliant authors of prose and po-

etry from the Golden Age of Elizabeth downward. It is an inspiration to know Pope and Addison and a wonderful privilege to be able to sit at the same table in Wills Coffee House with the illustrious Garrick, Sir Joshua Reynolds with his snuff box, Goldsmith, who "wrote like an angel," and Dr. Samuel Johnson, rolling and puffing, whose flowing periods were listened to with breathless interest by his contemporaries and which the little busybody Boswell has preserved to our time.

Mr. Winters is known as one of the ablest market letter writers of the day. Perhaps, if he were asked about it, he might give credit for the clearness of his statements and simplicity of his style, to that brilliant galaxy of writers that he knows so well.

### NEW OFFICES AT LINCOLN EXCHANGE

At the annual meeting of the Lincoln Grain Exchange the following officers and directors were elected for the ensuing year: President, J. S. Ewart of Ewart Grain Company; vice-president, E. N. Mitchell of Wilsey Grain Company; secretary-treasurer, W. S. Whitten. Directors: Eugene Leet of Wright-Leet Grain Company; B. M. Ford of Nebraska Corn Mills; C. J. Slater of Central Granaries Company.

The personnel of the standing committees for 1921 is as follows: Membership—Lee Wilsey, chairman, M. T. Cummings, H. E. Gooch. Arbitration—J. M. Paul, chairman, W. T. Barstow, J. M. Hammond. Appeals—John B. Wright, chairman, J. S. Waxman, F. E. Roth. Discounts—John D. Taylor, chairman, C. S. Crittenden, T. M. Waxman. Transportation—W. S. Whitten, chairman, L. J. Thurn, H. H. Wintersteen.

### THE PITTSBURGH MARKET

Practically no wheat being offered in this territory. Farmers are still holding, but our crop being very light, there is no reason to expect heavy offerings.

The receipts of corn have fallen off in the past week, due to light country offerings and consignments. It is not easy to originate corn at country stations, but Eastern demand is very tame.

There is a fair demand for oats of best quality, which would be suitable for seed. There is only a fair demand for No. 2 White oats, at prices in line with Western market quotations.

We find the movement of corn and oats very light, with no disposition on the part of country holders to force sales. Farmers in nearby territory are rapidly preparing for Spring work, and we do not anticipate any movement of consequence in the next 60 days.—*Harper Grain Company, Pittsburgh, Pa. Letter of March 12.*

### FOREIGN BUYING NEEDED FOR HIGHER PRICES

Providence has been smiling on the wheat bears. Winter killing has apparently been very small. Plant is generally in healthy condition except parts of Oklahoma and Texas where the Irish bug has caused some damage. Oklahoma is a fair producer, but Texas is a piker on wheat. Drought is the worst enemy of any grain crop. Southern Kansas needs rain. No damage appears to have occurred yet, but it will bear watching. Damage during April and May from drought is sometimes severe. Serious crop scares seldom develop before April, but season is early this year. Total supplies March 1 were only 18,000,000 less than last year when they were large. Argentina is not shipping as freely as expected. Will farmers there loosen up or hold?



Their storage facilities are limited. Australia has been shipping rather freely. General conditions make buyers conservative. Corn needs better cash demand. Supplies are so large buyers are indifferent. Foreigners are not buying freely enough to sustain prices.—*C. A. King & Co., Toledo, Ohio. From Special Market Report of March 12.*

#### CHANGES IN MEMBERSHIP

*Baltimore.*—New members in the Chamber of Commerce are: Edw. L. Davis, of Gill & Fisher; Frederic J. Couse, of The Texas Transport & Terminal Company, Ltd., steamship agency; Earling H. Snyder, Armour Grain Company. The memberships of the following have been transferred: Howard E. Ziefel, Scott F. Evans and Cyrus C. Lewis. Reported by Secretary Jas. B. Hessong.

*Chicago.*—The following were recently elected to membership on the Board of Trade: Chas. J. Moore, DeForrest Piazzek, Martin L. Jenks, Wm. T. Fraser, Philip L. Smith and Edw. V. Wright. The memberships of the following have been transferred: Jas. B. Carter, Geo. W. Stone, Jas. F. Parker, Chas. K. Templeton, Jesse H. Ridge and Edward J. Ryan. Reported by Secretary John R. Mauff.

#### CHICAGO BOARD RENEWS PRIZE

Ten thousand dollars will be given in prizes again this year by the Chicago Board of Trade to encourage farmers to raise better crops. This enables the International Grain & Hay Show to become an annual event. It is held in connection with the International Livestock Exposition.

"I have been authorized to announce renewal of the offer of the \$10,000 for next year," said George S. Bridge, representing the Board of Trade. "A meeting of the committee of college experts who prepare the lists will be held soon. Growers will have opportunity to prepare early for their entries."

"The importance of the show in the way of encouraging better crops has been clearly shown. The total number of entries of grains, small seeds and hay was 3,000, a 50 per cent increase over the first exposition. Scores of letters have been received from the 33 states and five Canadian provinces represented, asking about plans for this year. Many new colleges and experiment stations will add to the educational exhibits this year. This will greatly increase the interest."

#### SMALL MOVEMENT OF GRAIN

The movement of grain in this market is very small and as a result the prices here are somewhat independent of the options and other outside bearish influences. The country roads are in such bad condition that it looks like the grain movement will be further curtailed.

We find very little grain in the hands of the country elevator people for the prices in every commodity is very unsatisfactory and the country elevators have been very much afraid to stock up on anything.

The majority of the trade here feels that corn and oats are very low and that wheat is in a position to swing either way very easily. We still believe that any one of the grain and hay business should be very conservative up against these very unsettled industrial conditions, tight finances and the security market is very bearish.—*The Mutual Commission Company, Cincinnati, Ohio. Market Letter of March 12.*

#### SEASONAL OATS DEMAND

Eastern demand for oats is picking up. Arrivals from the country come out to meet the demand but seeding operations are about upon us. The huge oats visible of 34,000,000 compares with 10,000,000 one year ago. Oats export demand is about flat. Prospects are for a heavy carryover and the visible may be drawn upon drastically.

Corn is a leading "1921 fighter." The bear side may have tired itself out. Resistance to enormous receipts and bearish farm reserve figures suggest little possibility of permanently depressing prices at the light-receipt-spring-rise period.

The winter supply of hogs is about sold. Provision stocks are moderate. A further hog price advance as is usual in March can be expected al-

though packers may strongly resist. A climb similar to the last two years with the resulting hardship to killers is beyond any ideas.

Oats require comparatively little labor. Fall and winter plowing conditions were excellent. Therefore—more talk of a large acreage. 1909 to 1914 the oat acreage ran 35 to 38,000,000.

Mild winters forecast a moderate plow up unless followed by a freezing thawing spring or severe blowing southwest. But such winters are not so conducive to large yields. The December 1 condition of wheat was 87.9 per cent on 40,600,000 acres.—*E. W. Wagner & Co., Chicago. From Wagner Letter of March 12.*

#### THE FIRST TRADE IN FUTURES

And it came to pass in those days, being in the sixth year of plenty before the seven years of famine, that Pharaoh, the king, began to be worried over the government's huge visible supply of grain. The king, moreover, became of a sad countenance and neither could 600 dancing maidens specially selected from the famous Aphrodite-Astarte gardens of Alexandria, nor the full band of players on the cymbals, dulcimer and harp, smooth the lines of care from the royal brow. It fell about therefore, when a company of merchants arrived from Mesopotamia saying, "Sell us O king, we pray thee, 20,000,000 measures of corn to be delivered in Sep-



THE KING AND JOSEPH DISCUSS FUTURE TRADING

tember of the third year after the famine has struck the land," that the king changed his raiment to glad colors, and after anointing his beard, ordered to be brought before him his chief steward Joseph, that he might consider with him the working out of this new and interesting state policy.

"Joe," said the king, after his chief steward had given the Egyptian high sign in his usual graceful manner, "there is even now a bunch of rubes at the gates of the city who want to buy 20,000,000 measures of corn for delivery during the third year of the famine. It sure shows wisdom and foresight on their part and yet I've gotta hunch it will be wise to hedge our stocks by a future sale such as they desire. The point that gets me, Joe, is the price at which to start this sale for future delivery."

And it came to pass, after Pharaoh had made an end of speaking, that the chief steward lifted up his voice and said, "You're doggone right king, we've got corn to burn. The warehouses filled the past week makes our visible supply compare with an average year as your last pyramid to a piebald crocodile."

"Seems to me to sell a part of this stock is good business. Besides, if we refuse to sell, and there's any hitch in that dream of yours, I won't want to be the one to handle the resultant corpse."

"I'll admit the price is a problem. If we make it too high, there'll probably be a big kick from the Nile farmers for more money. They may, peradventure, even hold their corn on the farm and thus curtail the Government buying. I suggest that we consider this very important subject further,

over a pint of Mrs. Pharaoh's home brew. I hear that her last boilerful was prime." Thereupon the king and his chief steward went into executive session.

And it came to pass on the day following, that an announcement was made by regulation tablets posted throughout the various markets of the city, that the Egyptian Government had made a sale of 20,000,000 measures of corn to Mesopotamia for future delivery, on private terms.

#### EXPECT BETTER DEMANDS FOR COARSE GRAINS

Corn trade has been quiet during the past week, and despite the heavy receipts, very little has shown up on the tables, as most of the corn arriving here is being worked for export. It is confidently expected that the reopening of the Eastern condenseries, which occurred March the 1, will soon begin to make itself felt in the shape of a better demand for corn and all coarse grains.

Receipts of oats have been fairly liberal but have found a ready market, especially the choicer grades, which seem to be in demand and are quickly picked up by the houses that are quoting oats for seed purposes.

There is very little doing in wheat at present, as millers report absolute lack of flour sales. Competition very keen, due to their being very little export business.—*Seymour-Wood Grain Company, Buffalo, N. Y. From Market Letter of March 12.*

#### TERMINAL NOTES

P. W. Poorman of Humboldt, Ill., is contemplating establishing a grain business at Cairo, Ill.

Mayfield & Co., of Chicago, are now being represented in Illinois and Indiana territory by J. E. Walters.

Henry T. Clarke, attorney and traffic manager of the Omaha Grain Exchange since 1917, resigned this office on March 1.

Geo. R. Ellin, recently representative on the New York Produce Exchange, of Blythe & Bonner, has accepted a position with the grain firm of Knight & Co.

John J. King, formerly with the old firm of Eugene McDonald Company, Boston, Mass., has established a grain and feed brokerage business on that market.

The will of the late Henry W. Rogers former president of H. W. Rogers & Bro. grain merchants of Chicago, was probated in March. It disposed of an estate valued at \$575,000.

On and after March 1 the Girard Point Elevator Company and the Philadelphia Grain Elevator Company decline to receive orders for the drying of corn to 12 per cent moisture content.

C. M. Woodward of the Western Grain Company, Kansas City, Mo., recently returned from a business and pleasure trip to San Antonio, Tex., and other Southwestern points.

A. T. Sawyer succeeded C. S. Leach as manager of the grain department of the Langenberg Bros. Grain Company at Kansas City, Mo. Mr. Sawyer comes from the home office at St. Louis.

Ralph Gray & Co., one of the well-known grain firms of Cincinnati, Ohio, have moved their general offices from the Mitchell Building to more commodious quarters in the Neave Building.

Jos. Wild, with E. W. Wagner & Co., Chicago, Ill., returned home March 10 after a nine weeks' vacation spent in California and in Honolulu. Mr. Wild was accompanied by his wife and for Mr. Wild's impressions while absent, see future issues of the Wagner Letter.

Thos. W. Keelin, head of T. W. Keelin & Co., extensive grain and hay dealers of Chicago, was expelled in March from the Chicago Board of Trade. The specific charge was the giving of short weights to their customers through a double scale ticket system. The investigating committee for the Board was composed of L. L. Winters, E. A. Doern and Howard Lipsey. Mr. Keelin had been previously indicted by the grand jury of Cook County, and the Federal Trade Commission is concluding an



investigation of the Keelin interests which includes the interstate business of the Prairie State Milling Company of which Mr. Keelin is owner.

The National Brokerage Company of Memphis, Tenn., of which L. C. Kavanaugh was sole owner, has been purchased by F. and C. E. Hencke who will continue the business under the old firm name.

The Gillespie Grain Company has been organized by Frank J. Gillespie to carry on a general grain and feed business at Memphis, Tenn. Mr. Gillespie was formerly with the Delta Flour & Seed Company.

The Continental Grain Company of Chicago has been incorporated by Frederick and Simon Mayer with capital of \$10,000 to conduct a general grain brokerage business; offices are at 11 South LaSalle Street.

J. E. Heniken, chief grain inspector at Cleveland, Ohio, has resigned. He has been chief inspector at Cleveland for over 13 years and feels that he is entitled to a rest. His successor has not yet been named.

M. C. Burns has purchased the interest of H. A. Smith in the Chippewa Feed & Grain Company with offices in the Chamber of Commerce Building, Buffalo, N. Y. Mr. Burns is now president of the company.

Fred Weidmer, who conducted a grain business on the Merchants Exchange, St. Louis, Mo., a few years ago, has purchased his late brother's membership and reengaged in the grain business after his former absence "on 'Change."

F. C. Vincent, vice-president of the Simonds-Shields-Lonsdale Grain Company, Kansas City, Mo., and former president of the Kansas City Board of Trade, sailed early in March for a three months visit to Europe.

Elevator men of Kansas and adjoining states have formed a grain marketing agency to be known as the Midwest Farmers' Terminal Grain Agency with a capital stock of \$1,000,000. Head offices will be at Kansas City, Mo.

Leo J. Gaughler has succeeded Alex R. Merkelson as representative of Nye, Jenks & Co., on the New York Produce Exchange. Mr. Merkelson is now representing on the Exchange, the grain firm of Simonds-Shields-Lonsdale Grain Company of Kansas City.

A receivership has been asked for the F. W. Brode & Co., one of the oldest grain, feed and cotton seed companies at Memphis, Tenn. The petition for receivership states that the liabilities of the company are more than \$400,000 with assets not exceeding \$150,000.

The Eales-Prescott Company has been organized at Sioux City, Iowa, to conduct a general grain commission business. Offices are in the Grain Exchange Building. Both members of the firm are well acquainted in the western grain trade and a good business is anticipated.

Geo. O. Strom, recently with the Sioux City office of Taylor & Bournique Company, is now manager of the grain department of the Farmers Terminal Elevator Company of Sioux City. The company expects to have its 1,000,000-bushel grain elevator ready for operation in June.

The Kellogg-Huff Commission Company of St. Louis, Mo., has moved from the Rialto Building to Room 139 Merchants Exchange Building. The new location is much larger than the old one and they are now in much better position to handle consignments and give the service for which they have become noted.

On March 1, the Terminal Elevator located on Terminal Railroad at East St. Louis, Ill., was sold by George Harsh and P. W. Harsh, doing business as the Terminal Grain Company, to A. H. Beardsley and T. M. Scott, who will operate it under the firm name of Terminal Elevator Company. The Terminal Elevator has a capacity of 100,000 bushels, with two legs and contains 26 bins. It is operated by electricity and is said to be one of the fastest and best transfer houses in the St. Louis market. It is located on a city square of ground 600 by 125 feet, has two private tracks, also a spur of the

Terminal Railroad, affording a total of 40 cars trackage. The location, on the Terminal Railroad, gives this plant unsurpassed railroad advantages, as it has access to all lines entering both St. Louis and East St. Louis. Mr. Beardsley is president and Mr. Scott, secretary of the Picker & Beardsley Commission Company of St. Louis.

Charles England, of Charles England & Co., grain and hay merchants of Baltimore, Md., has been appointed by President Jackson of the Chamber of Commerce to represent that body before the twenty-fifth annual meeting of the American Academy of Political and Social Science to be held at Philadelphia, May 13 and 14.

## TRADE NOTES

The Day Company of Minneapolis, Minn., has just equipped the three Rock Island Elevators at Kansas City, Mo., with complete Day Dust Collecting Systems.

James Stewart & Co., designers and builders of grain elevators, will remove their general Chicago offices on May 1 from the Westminster Building to the Fisher Building. The latter is centrally located and the company will have ample quarters on the twelfth floor where the latch string will be always out to their friends and patrons.

Chas. H. Ridgeway, state Senator of Kansas and secretary of Western Millers Mutual Insurance Company, was very seriously injured in an automobile accident at Topeka, Kan., on March 2. One shoulder was dislocated, three ribs were broken and he was badly cut about face and head. The accident is not expected to result fatally unless complications set in.

The Mutual Fire Prevention Bureau which has been for many years located at Oxford, Mich., will move its offices on April 1 to the Pelouze Building, 230 East Ohio Street, Chicago, Ill. E. F. Burroughs and Eugene Arms are joint managers of the Bureau. They will have ample room in the new headquarters and it is believed the more central location will give greater opportunity for service.

The American Society of Mechanical Engineers of No. 29 West Thirty-ninth Street, New York, N. Y., announces that May 23 to 26 has been chosen for the date of the spring meeting of the Society. The place selected is the Congress Hotel, Chicago, Ill., and sessions are planned by the professional sections on Aeronautics, Fuels, Management, Material Handling, Machine Shop, Power, Forest Products and Railroads.

E. W. Romweber of Cleveland, Ohio, and J. C. Beck of Greensboro, N. C., both representing the Robinson Manufacturing Company of Muncy, Pa., were recent visitors at Muncy and were further instructed by the company in regard to the completeness of their service department. This service department is a fine thing for grain dealers and millers and should be made use of by all who need expert advice in regard to problems in the operation of the flour mill or grain elevator plant.

John S. Metcalf Company, grain elevator engineers, is remodeling its offices in the Temple Building for the purpose of giving greater convenience to the drafting and other departments. The company reports that the Sydney Terminal Elevator at Sydney, New South Wales, has reached the stage for receiving grain. Grain is also being received in 28 out of 71 country elevators designed by the John S. Metcalf Company for the New South Wales Government.

Vice Consul Pisar, of Cape Town, reports that the South African Railways and Harbors Administration is inviting tenders for the construction of one terminal grain elevator at Cape Town, with a capacity of 30,000 tons; one terminal grain elevator at Durban, capacity 42,000 tons; and 34 country elevators ranging in capacity from 1,800 to 5,800 tons. The drawings, consisting of approximately

H. B. Jackson, of the grain firm of Jackson Bros. & Co., on the Chicago Board of Trade and former vice-president of the United States Grain Corporation, was struck and severely injured March 12 by a taxi-cab while crossing a down town street in Chicago. He was taken to St. Luke's Hospital where it is expected he will soon recover.

The Port of Astoria of Astoria, Ore., has established a traffic and transportation department under the management of Roger D. Pinnes, recently of the Pacific Steamship Company. Mr. Pinnes has had a wide experience in transportation matters and his knowledge and efforts may be expected to bear much fruit in the development of the port.

150 sheets, are available for inspection by interested buyers at the office of the High Commissioner for the Union of South Africa, 32 Victoria Street, London. A deposit of approximately \$400 will be required for a complete set of drawings and documents covering the elevators at Cape Town and Durban, and a similar deposit of \$80 for the drawings and documents of the country elevators. Contractors submitting bona fide drawings and documents will be entitled to a complete refund of these deposits. Tenders are to be lodged in London by noon Monday, May 2, 1921.

W. F. Leggett, advertising manager for the Webster Manufacturing Company of Chicago, was the principal speaker before the meeting of the Engineering Advertising Association of Chicago on the evening of March 8. Mr. Leggett's subject was the "Ideal Advertising Manager." He pointed out the necessary qualifications, and the great opportunities open to advertising men trained in the engineering profession. His talk was interspersed with stories and personal experiences which were greatly appreciated by the audience.

The Dust Recovering & Conveying Company, engineers and manufacturers of Cleveland, Ohio, has published some very interesting literature on their Pneumatic Conveying System and the Development of Dust Collecting Equipment. The importance of this latter is very well known when the great loss of life and property, the past few years, due to dust explosions in grain elevators and mills, is considered. The bulletins on those subjects are fully illustrated. Copies will be mailed to any grain elevator or mill firm on request.

The National Grain Elevators Builders Association was formed at a meeting of a number of grain elevator builders and contractors held in Kansas City, Mo., early in March. The following officers were elected: A. C. Rynders, president, Wichita, Kansas; Walter D. Kaucher, vice-president, Kansas City, Mo.; R. M. Van Ness, secretary, Omaha, Neb. The next meeting will be held in Omaha, Neb., April 11, for the purpose of forming a permanent organization. The objects of the association are to promote better methods in building and to protect the trade against inexperienced and unscrupulous builders.

The Ellis Drier Company of Chicago, Ill., is erecting a new office building at their factory 2607 West Roosevelt Road into which they will move about the first of May. It will be a two-story building of brick and steel and will afford office facilities much superior to those in the down town district which have long since been outgrown. The company has just issued a new, handsome catalog on the Ellis Rotary Drier which will be mailed anywhere on request. They report an excellent business on their lines of machines, the past year, which include grain driers, cotton seed driers, rice driers, rotary driers, cookers, feed mixers, automatic tilting steam traps, steel plate fans and steam coils. The company in the new plant will give still better service to their patrons, now scattered through all parts of the United States, Canada and foreign countries.



## COMMUNICATED

## A COMMENDATORY LETTER

*Editor American Grain Trade:*—The writer has noted the article on "Fire Proof Plants and Dust Explosions," by David J. Price, in your issue of February 15. I desire to compliment you on your interest in the subject of fire prevention as evidenced not only by this particular article, but by your consistent featuring of the subject in both the AMERICAN GRAIN TRADE and the AMERICAN MILLER, ever since my acquaintance with the publications, which began about 18 years ago.

Very truly yours,  
Asst. Secy.-Treas., Michigan Millers Mutual Fire Insurance Company.

L. H. BAKER,

## A GOOD REPORT

*Editor American Grain Trade:*—We have read David J. Price's report and conclusions regarding "Fire Proof Plants and Dust Explosions." We consider this a most excellent article. Some time ago we arrived at the same conclusions as Mr. Price has and have printed and advocated to our assureds many times since then. We must give Mr. Price credit for a good report on this particular risk.

Very truly yours,  
Secretary, Ohio Millers Mutual Fire Insurance Company.

W. N. REED,

DUST AND DIRT ARE THE MAIN HAZARD  
IN FIRE RESISTIVE CONSTRUCTION

*Editor American Grain Trade:*—We have read with interest David J. Price's technical article, entitled "Fire Proof Plants and Dust Explosions," in the February issue.

We, of the flour mill mutual persuasion, have always contended that it made no difference where a risk was constructed of fire resistive material and supposed to be fireproof, it must be kept clean. The only hazard from our view point in fire resistive construction, is the dust and dirt hazard. So we insist on our members who have plants of this construction, that they keep them clean. Our experience and judgment would lead us to believe that there is no occasion for ever having a fire in a fire resistive plant, because if it is kept clean and free from dust, there is very little in it to allow a fire to get started.

Yours very truly,  
Secretary, Millers Mutual Fire Insurance Association of Illinois.

G. A. McKINNEY,

## A COMPLETE ENDORSEMENT

*Editor American Grain Trade:*—Your issue of February 15, containing the article, "Fire Proof Plants and Dust Explosions," reached us a few days ago, but we have been so busy trying to get some new work, without much success, by the way, that we have not taken time to read this article through until just now. This is a very complete article and as Mr. Hettelsater was on the site of this explosion within 30 minutes after it happened and as the writer was there the following day, we feel free to comment on Mr. Price's report regarding conditions and result of the explosion as well as the apparent condition of the building before the explosion. We want to say that these statements as set forth by Mr. Price are absolutely correct.

We note particularly the various theories that have been advanced regarding the cause of this disaster and believe that Mr. Price is right when he simmered these theories down to one of the three causes in connection with electric wiring. It is our own opinion that one of the workmen accidentally struck one of these light bulbs with a broom or shovel while cleaning up in the basement. Of course, if this is true, the man did not live to tell the story.

We think the suggestions for preventing accidents of this kind are very good and if they were

strictly complied with, there would be no such dust explosions. Some of these suggestions would undoubtedly necessitate considerable additional expense in first cost, but the insurance gained thereby would be cheap. We believe that the most obvious error in construction of this plant was in the lack of adequate ventilation and window area. If there was ever a dust trap in the nature of a so-called fireproof elevator, we are frank to say that this was one.

Yours very truly,  
Jones-Hettelsater Construction Company.

E. N. JONES,

## ANOTHER CAUSE OF DUST EXPLOSIONS

*Editor American Grain Trade:*—I have read with interest in your issue of February 15, the article "Fire Proof Plants and Dust Explosions," by David J. Price, and I note he has gone over carefully all the common causes to which fires of unknown origin are attributed. But he has failed to mention one cause that I have for years felt caused some fires of unknown origin, and I have never seen or heard of any one mentioning it as a possible cause.

It is this: In handling grain it is not uncommon to find pieces of flint or other stone, and it is a well known fact that a spark can be easily had from striking flint and steel. The No. 3 Elevator in the plant Mr. Price describes was in operation and a spark from flint striking the steel legging could have, in my opinion, caused the explosion.

I saw a minor explosion once that did not extend the machine in which it occurred, and did no damage further than blowing the iron doors open and the miller in charge said it was the second time it had occurred to his knowledge in that mill. No other cause was apparent, and flint was at times present in small pebbles in the wheat.

I would appreciate hearing from others on this point.

Yours respectfully,  
B. M. ESTES.

B. M. ESTES.

BETTER CARE AND MAINTENANCE  
SHOULD PREVAIL IN THE FUTURE

*Editor American Grain Trade:*—We have noticed David J. Price's technical article entitled "Fire Proof Plants and Dust Explosions," in the last issue of the AMERICAN GRAIN TRADE, and must say that Mr. Price has handled the subject in a very painstaking manner, especially with reference to the concrete elevator explosion which is so thoroughly described. We concur in his theories as to the cause of the explosion, and might mention that the elevator under consideration was found in a very dirty condition even the day of the fire, and we see by Mr. Price's account that some six or seven men were very busy in getting the house cleaned up.

A great deal of dust no doubt had accumulated for some time and with the force of men sweeping and dusting about and the sweeping system more or less out of commission, the air was likely very much more permeated with inflammable dust than the usual dust of operating the machines. The men no doubt all felt very secure in the thought that a fire could not do any damage in so well a constructed plant and may have thought any instructions as to an occasional smoke or lighting of a match was not as dangerous as might be thought.

Again, some of the men may have broken an electric globe in sweeping around, so that there are different ways that a fire could start in that kind of a house with the air laden with dust as it was in this case and no matter how good the construction, once a fire communicates with elevator or flour mill dust, there is an explosion as great as if there had been a supply of powder or other explosives in the elevator which had been touched off.

We believe that in cases of fireproof construc-

tion it is just as important that all dust be promptly cared for as in a more combustible structure. The fires in a so-called fireproof construction we have had in the last few years, with the data that has been furnished the public, has brought realization of that fact, and better care and maintenance will prevail in the future. If it does not, they will be subject to another accident as in the case of the elevator that was destroyed with such loss of life to the employees.

Yours truly,  
Secretary, Mill Owners Mutual Fire Insurance Company of Iowa.

J. T. SHARP,

## DUST EXPLOSION HAZARD APPLIES PARTICULARLY TO CONCRETE PLANTS

*Editor American Grain Trade:*—Prof. David J. Price's article regarding dust explosions is an excellent description of a hazard that has always existed in mills and elevators, but which, fortunately, has been well understood by the mill mutual companies, hence with their constant education of the assured has been greatly minimized.

The article in question is particularly timely, in that it has been difficult to have the owner of the splendid modern reinforced concrete plants understand that in spite of the excellence of his construction the hazard of the dust explosion is a particularly serious one for him.

Of course, the standard fire insurance policy might easily not cover damage occasioned by a dust explosion, hence the urging of clients to carry explosion insurance designated particularly to cover that hazard which the fire policy does not.

Very truly yours,  
Secretary, Millers Mutual Fire Insurance Company of Texas.

GLEN WALKER,

COUNTRY ELEVATORS SHOULD ALSO  
RECOGNIZE THE EXPLOSION HAZARD

*Editor American Grain Trade:*—We have gone through the article "Fire Proof Plants and Dust Explosions" by David J. Price, which appeared in the February 15, 1921, issue of the AMERICAN GRAIN TRADE. We agree with you most heartily that this article by Prof. Price is a distinct contribution to the history of fire hazards of grain handling establishments. In fact he has covered the subject so thoroughly that we can find little to add thereto.

Of course, our work lies more with the country than with the terminal elevator. Yet there are a great many so-called fire proof country elevators being built today and much of what Prof. Price has to say in his article refers to these houses.

Our experience has been that poor housekeeping is the chief defect in the so-called fire proof house. The owners of these properties and the men working therein labor under a false sense of security, with the result that the house is neglected. The writer has been in concrete country elevators where he found it necessary to wade through dirt to his knees, and yet, notwithstanding the fact open electric switches were used, the owners and employees seemed to think there was no danger at all. Now any attempt to get better conditions in this class of house must start with putting those responsible for the care thereof in the proper frame of mind, and *most of them are not there today.*

We believe that Prof. Price is on the right track when he says, "In order to prevent high pressures from being built up within the plant by the heavy concrete wall construction, it is suggested that walls as thin as practical be constructed. These walls should be constructed with large window areas with a view to providing good ventilation and decreasing the resistance offered to an explosion by the walls." An explosion in a frame country elevator is something almost unheard of so far as our experience goes, and yet all the elements of an explosion are present in the frame house as well as in the so-called fire resistive house.

It is our contention that the better ventilation in the frame house accounts for the very few explosions that have occurred therein. A fire resistive house, and especially a concrete one, is little more than a concrete box with little or no ventilation. The result is that it is hard to keep clean under ordinary methods. Dust accumulates in all



parts of the house and if an explosion occurs, the material is all there to make it a disastrous one.

Prof. Price recommends separate dust collecting systems for the different parts of the plant. This recommendation, of course, refers to the terminal house. As a rule the country elevator is without a dust collection system, and we are glad to know that he brings up the vacuum system of cleaning. In our opinion, this is something that could be well adapted to the country elevators at least, with good results.

Of course, we believe that as much dust as possible should be collected before it gets a chance to settle around the elevator, but even under the best conditions there will be dust. The walls of concrete elevators are usually not smoothed over. This roughened surface makes an excellent lodging place for dust. A house that has been in operation for a year or two will, unless good care has been taken of it, have at least an inch of dust adhering to the walls. The best way to take care of this, we believe, is with a vacuum cleaner. If brooms are used a dust cloud will be produced, and thus create the very condition it is desired to avoid.

Again we wish to say that we are very much pleased with Prof. Price's article, and wish to congratulate you upon the publishing thereof.

Yours very truly, J. J. FITZGERALD,  
Assistant Secretary, Grain Dealers National Mutual Fire Insurance Company.

## THE PURPOSE AND AIMS OF THE ELEVATOR BUILDERS' ASSOCIATION

*Editor American Grain Trade:*—A grain elevator built right is the finest asset of the builder. The foremost construction firms of the country engaged in building grain elevators know this to be the truth. Why, then, should not the same apply taking grain elevators in general and all the builders collectively?

With this thought in mind a meeting of elevator builders was called for February 25 at the Coates House, Kansas City. Many of the leading elevator builders of the Middle West were present and organized the National Grain Elevator Builders' Association. With 22 charter members, the organization expects to increase its membership to comprise all the reputable and responsible firms in the business.

The need for such an association has long been evident. Every poorly constructed elevator erected by inexperienced or unscrupulous contractors is a blow that must be countered by all qualified elevator builders. The barn builder can take a contract to build a warehouse, but the structure he builds—is it a warehouse? The silo builder can build silos for silage, but elevators for the storage of grain are not silos. What can sidewalk makers be expected to know of the scientific placement of the steel bars in reinforced concrete walls that must stand the great pressure of grain?

During 1920, 17 elevators were blown over. Two hundred and thirty-four had to be completely overhauled and repaired. Eighty-seven were damaged by the elements and 250 were destroyed by fire. An enormous sum of money was spent to secure fire insurance protection on grain stored in combustible and cheaply constructed elevators. Hundreds of thousands of dollars worth of grain was destroyed in 1920.

How much of this can be prevented? The members of the National Grain Elevator Builders' Association declare a very great amount of this tremendous wastage can be avoided. It is such problems as this that the association hopes to solve. The men who design and build elevators know that the "cheap" elevator is the costly elevator to the owner. They have realized for many years that the best elevator is the elevator that is built right to begin with and then continues to save money for the owner in insurance, upkeep and repair costs, wastage from vermin and moisture, instead of eating into the profits deeper and deeper each year until lightning, wind, fire or bankruptcy ends its costly career.

But Mr. Smith, who proposes to build and own an elevator, is not expected to be proficient in the designing and building of his elevator. He knows the buying and selling of grain. The men who have designed and built many elevators and have made

a study of the qualifications and requirements of grain storage structures, know how to build Mr. Smith's elevator right. They will not undertake to build Mr. Smith's barn or house, or his sidewalks, and silo. That should be left to the house contractor and to the builder of silos and sidewalks.

The object in forming the new Association is to promote the building of better elevators. The Association will include in its membership only such builders as are qualified by experience and reputation to design and build good elevators to the lasting satisfaction of the owners. The Association aims to protect owners from dealing with unscrupulous and inexperienced builders whose work is costly to the owners and detrimental to the elevator construction business.

The next meeting of the Association will be held in Omaha, April 11. The officers elected at Kansas City are: President, A. C. Rynders of the Star Engineering Company; vice-president, Walter D. Kaucher of the Frank Kaucher Company; and secretary, R. M. Van Ness of the Van Ness Construction Company.

Yours truly,

EDISON KIPP.

## ACCUMULATED DUST AS DANGEROUS AS DYNAMITE

*Editor American Grain Trade:*—We have read with interest the article "Fire Proof" Plants and Dust Explosions." The conclusions reached are valuable for the instruction of owners of these large terminal grain elevators.

The big thing is to bring before the trade in such a way that it will be noted and remembered the fact that accumulated dust is fully as dangerous as dynamite and that it can be touched off much more easily; that dust must be drawn from each machine and elevator and concentrated by use of metal dust collectors that it may not be held in suspension in the air in sufficient quantities to support combustion; and that the lives of the employes, as well as the safety of the property depends on every one connected with the elevator using the utmost precaution.

It will be interesting to you to know that the 10 insurance companies supporting this Bureau have not suffered a single large loss from dust explosion except the one at Beatrice, Neb., where it was proved beyond a reasonable doubt that the flour packer stuck a lighted match in the flour bin. There have been fires from small explosions in rolls or dust spouts communicating to cloth dust collectors, but we are fast getting away from these by the encouragement of the use of metal dust collectors only. Our theory has been that a clean plant and a good control of dust eliminates any probability of dust explosion, and our contention is fast being proven.

You are to be commended for giving space to this excellent article on this vital subject.

Very truly yours, EUGENE ARMS,  
Manager, Mutual Fire Prevention Bureau.

## DECONTROL IN FRANCE

By an official order dated January 30, M. Paisant, assistant secretary to the Ministry of Finance, was commissioned to supervise the winding up of the Food Ministry. This order has awakened considerable interest in the grain and milling trades where it is regarded as a definite move towards the final abolition of control. The Food Ministry is known to possess enormous quantities of wheat, flour, rye, maize, etc., and how M. Paisant will effect the liquidation of these stocks is a subject which is causing much speculation and comment.

The French Government at the present time, continuing its war policy, exercises a monopoly in the importation of wheat. But while it fixes a price of 100 francs per quintal for domestic wheat, it must pay the higher market price for its import requirements. Nevertheless the imported wheat must be sold in France at the lower domestic price, so that this monopoly results in a net loss which must be borne by the Treasury. The economic situation in this respect, however, is somewhat ameliorated by a decline in the world price of wheat during the past few months because of

(a) reduced ocean freight, (b) decreased European demand due to unfavorable exchange rates, and (c) excess of the world's exportable surplus over its deficit requirements of wheat for 1920-21. Accordingly, American wheat, quoted in June, 1920, at 240 francs, declined in December, 1920, to 130 francs, rose in January, 1921, to 145 francs, and therefore registered a net decline of 95 francs per quintal in about seven months. At the same time it should be observed exchange declined from 17.5 francs to 13.2 francs to the dollar with a corresponding rise in the value of the franc from 5.71 cents to 7.57 cents.

## NEW TRANSPORTATION COMMISSIONER OF THE GRAIN DEALERS NATIONAL ASSOCIATION

The Executive Committee of the Grain Dealers National Association, at a recent meeting held in the secretary's office at Toledo, Ohio, decided to establish a transportation department with a permanent salaried man in charge. The new Transportation Commissioner has been selected and he will take charge of the department on April 1. He is W. K. Vandiver, who has for some time been connected with the United States Railroad Administration at Washington. A picture of Mr. Vandiver is presented herewith.

Mr. Vandiver is a Louisville, Ky. product. After graduating from the high school in the Kentucky city he entered the general freight office of the Louisville & Nashville Railroad at Louisville. When he left there eight years later he was chief rate clerk. He resigned from the L. & N. to accept



W. K. VANDIVER

the chief clerkship of the Southeastern Freight Association at Atlanta, Ga., where he remained for four years.

He then became chief clerk in the general freight office of the Mobile & Ohio Railroad at St. Louis. In that position he looked after the solicitation of traffic and general freight affairs. After six years of such work he was appointed assistant general freight agent and occupied that position for 11 years. In that capacity he attended rate conferences and formed an extensive acquaintanceship with representatives of large shipping interests as well as of traffic officials in various parts of the country. He handled all of the Mobile & Ohio's cases before the Interstate Commerce Commission as well as before the railroad commissions of the various states.

Mr. Vandiver resigned from the Mobile & Ohio in March, 1920, to become assistant manager, department of traffic, United States Railroad Administration, having charge of formal dockets relating to reparation. In his present position his time has been occupied almost exclusively with the preparation and handling of reparation cases before the Interstate Commerce Commission, these cases arising during the period of Federal control, namely, from January 1, 1918, to February 29, 1920, inclusive.

Owing to the great growth of the Grain Dealers National Association in recent years it has become necessary for the organization to expand and widen the scope of its activities. In 1914 the Association had but one Arbitration Committee. Now it has six such committees, and it has recently published a



book of arbitration decisions, indexed and bound in cloth.

The transportation work has grown like that of arbitration. It has been in charge of a Transportation Committee composed of members of the Association who were busy business men with large affairs of their own which compelled their attention. It was inevitable that the time would come when this department must be reorganized and placed in charge of a paid employe who could give it his entire time and attention.

Henry L. Goemann, the chairman of the Transportation Committee, has, perhaps, done more work for the Association in the many years of his faithful service than any man connected with the organization since it was founded in 1896. He could not however, be expected to make any more sacrifices in the interest of the members. At the Minneapolis convention Mr. Goemann asked to be relieved from the burden of voluntary service as he felt that he had done more than his share in bringing the Association to its present position. The Executive Committee then began to look around for a salaried transportation commissioner and finally selected Mr. Vandiver from a field of applicants for the position.

The new Transportation Commissioner will have his office at Association's headquarters in Toledo. There are several important problems awaiting his early attention. Among them are the policing of the decision of the Interstate Commerce Commission in the loss and damage case, the installation and maintenance of side tracks and ground rentals, the liability clauses in railroad leases, the reduction in freight rates, and many others.

The railroad problem was never more acute in the history of the country than it is now, as every shipper is only too well aware. No one knows what the next year or two may bring forth. The grain interests as a whole must have competent representation before the Commission and Congress in these trying times. They must have a man who can devote his entire time to the work. The National Association in employing Mr. Vandiver is supplying that want.

## PENNY WISE POLICIES

The Alaska appropriation in the Agricultural Bill was cut by the House from \$120,000 to \$75,000. Professor C. C. Georgeson, agronomist in charge of the Alaska Experiment Station, had something to say of this cut.

Alaska has an area suitable for grain growing seven times as large as New Jersey, and an equal area that can be used for grazing. The station at Sitka has developed a hybrid wheat by crossing a Siberian Spring and the Canadian Marquis which is early enough in maturity to develop at 65 degrees 30 minutes north latitude. A crop of 3,000 bushels was raised in the Tanana Valley last year and seed has been furnished to many farmers for this year.

Barley which grows at 20,000 feet above sea level was brought from India and crossed with Canadian Champion, which makes a strain of superior quality and hardy enough for the climate. A Siberian Alfalfa has also been found which thrives in the country.

With proper encouragement Alaska could soon become self supporting agriculturally and might even become an exporting factor. But the House of Representatives has seen fit to save a penny so that many pounds can be expended in feeding this great territory.

## ELEVATOR BUILDERS ASSOCIATION FORMED

A group of grain elevator contractors and builders from various parts of the Middle West met at the Coates House, Kansas City, on February 25, and organized the National Grain Elevator Builders' Association. The object of forming this Association is to promote the building of better elevators to the mutual advantage of the contractor and the owner. The Association will include in its membership only such builders as are qualified by experience and reputation to design and build good elevators to the

complete satisfaction of their future operators.

This will protect owners from dealing with unscrupulous or inexperienced builders, whose services are much more expensive in the long run than those of builders who are certain to build a serviceable, fool-proof elevator. It is believed that by the various responsible contractors working together to this end, they can eliminate many of the evils now present in their business, and place it on a better footing with the public.

After perfecting a temporary organization, and electing officers, committees were appointed on Membership, Constitution and By-laws, and Publicity which will report at the next meeting when a permanent organization will be formed. This meeting will be held in Omaha, on April 11, 1921. The following officers were elected:

President, A. C. Rynders, of the Star Engineering Company, Wichita, Kan.; vice-president, Walter D. Kaucher of the Frank Kaucher Company, Kansas City, Mo.; secretary, R. M. Van Ness of the R. M. Van Ness Construction Company, Omaha.

## IOWA FARMERS BUILD FINE HOUSE

The Burrell Engineering & Construction Company has just completed a 30,000 bushel elevator for the Farmers Co-operative Company at Lost Nation, Iowa. The grain plant consists of a work-



PLANT OF FARMERS CO-OPERATIVE COMPANY, LOST NATION, IOWA.

house, truck and wagon dump, office, and cob bin, all built of reinforced concrete. The workhouse is 26 feet x 26 feet x 94 feet 6 inches high; the cob bin is 10 feet wide, 14 feet long and 12 feet 6 inches high; the office is 18 feet 2 inches long, 12 feet wide and 12 feet 6 inches high.

The workhouse consists of a basement, which is 12 feet 6 inches below the base of rail, a first floor 4 feet above the base of rail, a scale floor, a cleaner floor, and distributing floor, arrangements being made for the installation of a 300-bushel Randolph Drier.

The elevator is equipped with one 1,000 bushel elevator leg, one large car corn leg, one No. 24 Western Sheller, one 9 inch screw conveyor, one 5-horsepower car puller, one 1,000-bushel automatic scale, one No. 33 gyrating sheller, one 10-ton Howe Wagon and Truck Dump Scale, fitted with a 10-ton combination truck and wagon dump, and also one manlift, which travels from the first floor to head floor, also one Randolph 300-bushel Drier.

The grain is received by wagons or trucks, the small grain being dumped into a sink and spouted by gravity into the 1,000-bushel small grain leg, the ear corn being dumped into another bin, and conveyed by means of a chain drag into the No. 24 Western Sheller, and thence into the large leg. The small grain is elevated and distributed to the No. 33 gyrating cleaner, or by-passed to any bin in the

house. The small grain from the cleaner may either be spouted to any bin in the house, or to the 1,000-bushel automatic scale.

The small grain leg can also receive grain from any bin in the house, elevating and discharging it into a spout, delivering it directly into the farmer's wagon.

The ear corn is shelled, elevated and spouted into the No. 33 gyrating cleaner, where the cobs are separated and the shelled corn cleaned. The cobs may be spouted from the cleaner directly into the cob bin, which is located over the wagon and truck shed. The cleaned grain is spouted into the 1,000-bushel automatic scale for shipment, or to either of the workhouse bins.

The power used is electric throughout, three motors of 20, 15, and 7½ horsepower respectively doing the work. The power is transmitted by belt, chain and gears. The legs and spouting are of concrete or steel. The machinery equipment was furnished by the Union Iron Works located at Decatur, Ill.

The Burrell Engineering & Construction Company and the Lost Nation Farmers have put in considerable time and study in the design and construction of this elevator, and have developed one of the finest combination country and terminal elevators in the State of Iowa. The building being practically 100 feet above the base of rail, and the ground location being a very prominent point in Iowa, the elevator can be seen for many miles.

## SCALE REQUIREMENTS

To assure protection on loss and damage claims, under the provisions of I. C. C. Docket 9009, all new scale installations should conform to the rules suggested by the Interstate Commerce Commission. These provisions do not govern scales installed previous to the date on which the rules go into effect provided such scales meet the required tests or sensibility and accuracy. Last month we published that portion of the rules covering the installation of automatic scales. Herewith are given the rules for design of automatic scales. In succeeding issues will be published all rules for hopper scales.

### SCALE DESIGN

6. Scales shall be of such construction that they will remain permanent in ratio and sensibility and repeat their weight indications within one-half the prescribed tolerances.

14. The sensibility reciprocal in an automatic scale is the greatest weight required to move the beam from the horizontal position to a permanent contact with either the upper or lower member of the scale with which it ordinarily comes in contact in the cycle of operations. In a scale provided with a trig loop, the sensibility reciprocal is the added weight required to be placed upon the hopper to break and turn the beam from a horizontal position in the middle of the loop to a position of equilibrium at the top of the loop.

15. The sensibility reciprocal shall never exceed the figures in the following table. The manufacturers' tolerances for new scales shall never exceed 50 per cent of the figures:

Load Lbs.	S. R. Ozs.
300	2
600	4
1000	6
2000	11
3000	16
6000	24

21. Scales shall be so designed that the weight hoppers will hold at least 12 per cent more grain than their rated capacity when fed in the normal manner of their being operated.

22. Scales shall be so designed that the weight hopper will clean out after every draft.

23. Scales shall be so designed that when weighing any free running trashy grain, foreign matter or trash cannot prevent the feed gate closing.

24. Scales shall be so designed that it is impossible to pass grain through any scale unweighed, except by the operator making some mechanical adjustment.

25. All scales shall be provided with two tallies directly mounted on the scale, one of which preferably should be type registering.



The Cost of Raising Grain

Extension of the Government's Tables on Wheat, Corn and Oats—Ascending War Prices Chased by Higher Labor and Increased Land Values—The Disaster to Last Year's Crops the Logical End of Inflation

By P. S. GOODMAN

MUCH costly white paper has been wasted the country over in the past few months in explanation of the profitable or unprofitable result of last seasons farming operations—not in one product, but in all products of the soil. Obviously the personal equation has entered into the controversy, and either the dark or bright side of the word picture has been painted. Agricultural colleges, farmers' associations, have entered the lists to show the unfortunate plight of the farmers of the country.

In none of the statements that I have read, and I have attempted to follow the controversy with the interest of an unprejudiced mind, have I found one single reference to the economical readjustment that is following the war inflation, as it followed all other forms of inflation in the past. The extent of the losses to the producer have not yet reached the terrifying extent of that which followed the collapse of the inflation that developed with the great railroad building and improvement in farming devices in the eighties, the bottom of that fearful decline being reached in 1894.

It may be considered unwise for me to assume the temerity to rush into the controversy at this time, and lay down a general set of rules for ascertaining the cost of raising grains, and pointing out the features of the rapid ascent in values and profits, and the smashing descent of the past six months. However, I take my stand upon the careful investigation of the Agricultural Department, at a time when no one was particularly concerned in starting a controversy over costs of farming.

It was in 1910 that the Department, taking advantage of the mental alertness of the farmer following the filling out of census schedules, started the investigation to ascertain the costs of raising the principal crops of the country in 1909. The information was sought from farmers who kept books; all others were requested to ignore the inquiry. The result was a large return from thousands of farmers, covering every state in the Union, and in sufficient numbers to make an average.

The results of the inquiry were printed in detail, by states, and for the country as a whole. The costs on corn appeared in the Government Crop Reporter in April, 1911; on wheat in the May, and on the oats in the June number of that year, other crops appearing later in the same year. Consulting the tabulation of the returns it will be found that the average yield of the grains in the states and in the country over was far in excess of the averages given for the 1909 crop by the complete report in December.

This variation is explained as due to returns being made by the progressive and leading farmers who occupied the best land and naturally applied most approved methods. The details as will be found in accompanying tables covered every feature of the manipulation of the land and handling of the crop. The average value of land as given is also much higher than the average value given by the Census Bureau for the same year, likewise the result of hearing from only the best lands under cultivation.

From these reports it is possible to extend the costs from year to year. The Agricultural Department has been keeping track of every feature affecting the farmer in publishing the same in the admirable Crop Reporter. Every year we have a table by states of the average price of plow lands, this estimate appearing usually in the March or April number. Every December, or in subsequent numbers, is given the cost of labor by states, in three classes; by the month, day labor, harvesting labor, all with or without board. With the detailed costs of farming in 1909, and the annual reports on the labor costs, average yields, monthly prices of products on the farms, and land values, it is comparatively simple to reconstruct the costs year by

year,—providing one has the patience to carry forward the figuring. This I have done.

A few observations on the tabulation in anticipation of objections or inquiries. I have applied the costs of the business farmers to all farms; when the actual costs of slovenly or unintelligent farming may be less, applied the costs alike to good and poor lands. In the valuation of the lands I have retained the proportions that the valuations by crops in 1909 bore to the average valuation. Hence the difference in the costs of wheat, corn or oats land in any given year. Land values do not include improvements.

The value of the grains are those reported by the government as being the average price that farmers received for the entire crop season. It may be possible that these prices are too high or too low, depending upon the average price in the period immediately following the harvest when the heaviest selling occurs, but on the whole I think the annual average is about as fair an approximation as it is possible to obtain.

It is much better than some of the recent estimate from interested sources which makes the price received the last and lowest. For the past season, the results are based upon the average farm price received up to March 1, and at the end of the various crop seasons, will be subject to adjustment to whatever change in prices occurs from now on. The method of valuation of the crops is far more preferable than that taken by the Government, which is the average prevailing on December 1.

The interesting feature is the war period. Ascent of prices did not develop until after the harvesting of the crop of 1915. On a tabular presentation the results of that year appear larger than the actual, as there is no way of ascertaining what proportion of the crops were lost or spoiled on account of the wet season, and the early frosts. I have eliminated 1915. I have given at the top of each set of tables, the percentage of the costs of labor compared with the par of 1909. The results of that year are the official, the others my extensions.

The results of the wheat crops follow:

WHEAT							
Labor costs, per cent	100	105	130	150	193	200	
Year	1909	1916	1917	1918	1919	1920	
Fertilizers	\$.58	\$.75	\$.80	\$1.00	\$1.20	\$1.35	
Preparation	2.11	2.22	2.74	3.06	4.07	4.22	
Seed	1.42	2.03	2.58	3.09	3.46	3.84	
Planting	.46	.48	.60	.69	.89	.92	
Harvesting	1.33	1.40	1.73	2.00	2.57	2.66	
Preparing for marketing	1.48	1.55	1.92	2.22	2.85	2.96	
Miscellaneous	.48	.50	.62	.72	.52	.96	
Total	7.85	8.93	11.99	12.78	15.56	16.91	
Yield per acre, bus.	15.8	12.2	14.1	15.6	12.9	13.8	
Value per bushel	.96	1.72	2.06	2.31	2.30	1.85	
Value per acre	15.17	20.98	29.04	36.03	29.57	25.53	
By products value	.82	1.60	1.72	1.96	1.96	1.64	
Total per acre	15.99	22.58	30.76	37.99	31.55	27.17	
Profit per acre	8.14	13.65	18.77	25.21	15.97	10.26	
Land value per acre	40.45	50.39	54.70	59.95	63.39	79.20	
Per cent earned on land	20.0	27.3	34.3	42.0	24.7	13.0	
Profit per bushel	.52	1.12	1.33	1.63	1.24	.74	

To avoid confusion I will comment on each set of tables in their order. The striking feature in the wheat table, as in the others is the response to the economic law of relativity of values. As the profits increase the hired man, observing the same, demands more for his labor; the producer is willing to pay more. The increasing return on the investment in the land enhances the value or the market price, and in this latter respect operated the speculative law of discounting the future; there was a disregard of adverse probability, and an obsession of a geometrical ascent in profits, rather than arithmetical. The result was a greater velocity in land valuation than in prices and labor.

Take the item of labor: In 1916 it was only 5

per cent higher than in 1909; in 1917 it increased another 25 per cent; in 1918, the young men having been called to the colors and labor scarce, the price costs advanced 20 per cent. In 1919, the post war inflation gave labor a jump of 43 per cent more; in 1920 the advance was only 7 per cent, as the midsummer marked the turning point of the world's price joy riding. In the five year period the total labor costs on the farm advanced 100 per cent over the 1909 average.

Costs of producing the crops, being largely labor, plus higher fertilizers, and increasing seed value, the total advance in the costs of production in 1920 was 115 per cent.

The rapidity in the advance of the price of the wheat,—the average farm price the country over,—was the main spring of the enormous acreages set out to grain, and the enhancement of the personal wealth of the producer. The 1916 price was 79 per cent over the 1909 average; the 1917 crop, boosted by our entrance into the war jumped 35 per cent more; the 1918 was lifted 26 per cent more, and 1919 was unchanged—the limit had been reached with the end of the war. The 1920 crop so far shows a decline of 47 per cent from the attainment of the previous two years, as related to the 1909 price, and has yielded so far 93 per cent over the 1909 average.

The wheat table as well as the others shows an added item to the price of the grain, being the by-products, the straw and fodder, and the relative value of this item has been extended on the basis of the price of the grain. The item of fertilizer is commercial, the farm manure not being considered as a cost.

Land values kept pace with the advance in the grain, and the average of the past year is that of March 1 last, from which there was another strong advance last spring and summer, which makes matters so much the worse for the buyers at the higher values. The average value of wheat lands to last season advanced 97 per cent. The ascending profits when applied to the returns on the land values showed an increase of 110 per cent to 1918 or more than double the returns of the 1909 and pre-war period.

The 1919 returns foreshadowed the debacle in land speculation by yielding an increase of only one-fourth over the pre-war. The 1920 results were disastrous in the continued rise in wages and land values. The returns on the land, that is the rental value of the land, declined 35 per cent below the pre-war return. The higher wheat market relative to other grains has thus far resulted in a fair profit to the producer, the country over. Despite the rise in wages and land values, the return to the producer, over and above his labor, which is included in the costs, was 60 per cent above the 1916-19 period.

The corn situation as extended for the same years on like basis as wheat follows:

CORN							
Labor costs, per cent	100	105	130	150	193	200	
Year	1909	1916	1917	1918	1919	1920	
Fertilizer	.82	1.10	1.25	1.50	1.75	2.05	
Preparation	2.11	2.22	2.74	3.06	4.07	4.22	
Seed	.24	.29	.43	.60	.60	.60	
Planting	.44	.46	.57	.66	.86	.88	
Cultivation	2.24	2.35	2.91	3.36	4.32	4.48	
Gathering	2.20	2.31	2.86	3.30	4.24	4.40	
Miscellaneous	.47	.49	.61	.71	.91	.94	
Total	8.52	9.22	11.67	13.19	16.75	17.57	
Yield, bushels	25.5	24.4	26.3	24.0	28.6	30.9	
Value per bushel	.62	1.33	1.50	1.57	1.53	.70	
Value per acre	15.81	32.45	39.45	37.68	43.76	21.63	
By products	1.20	2.40	2.60	2.60	2.60	1.30	
Total per acre	17.01	34.85	42.05	40.28	46.36	22.93	
Profit per acre	7.29	25.63	30.38	27.09	29.61	5.36	
Value of land	43.90	56.06	59.69	65.65	72.08	86.41	
Per cent profit on land	16.5	45.7	51.2	41.3	41.1	6.2	
Profit per bushel	.35	1.07	1.15	1.12	1.03	.17	

Deductions from the corn tables generally correspond with those respecting wheat and repetition will be avoided. The variations are interesting. The price of corn advanced more rapidly with the war than other grains, due to the increasing demand for meat animals and products thereof. In 1916 the price on the average paid the farmer was 114 per cent higher than 1909; in 1917 there was



a further advance of 28 per cent; in 1918, there was added 11 per cent; in 1919 the price showed a reaction; and thus far in this crop year the average price has been only 13 per cent above the pre-war, and at present is slightly below. Land values to last March doubled, and the increase since then has been large. The price so far exceeded the costs of labor and the rise in land values as to make an average return on the land investments 1916-1920 of 100 per cent.

The present crop based on the higher costs of wages and land shows a decline of 50 per cent from the pre-war return. It is in the small returns from the present crop of corn, and fear of lower prices, that has demoralized the producing element. The readjustment now under way is distressing to the producer, who like all other beneficiaries of the war time period has probably saved but little of the enormous returns of the four previous years. This contention is borne out by the situation in which many bankers in the producing districts find themselves, with large quantities of farmers' paper on their hands, and no immediate prospects of collection, and little chance to force collection.

The following table illustrates the course of the oats production, starting with the official figures of 1909:

OATS							
Labor costs, per cent	100	105	130	150	193	200	
Year .....	1909	1916	1917	1918	1919	1920	
Fertilizer .....	.40	.55	.62	.75	.90	1.00	
Preparation .....	1.88	1.97	2.44	2.82	3.63	3.76	
Seed .....	1.12	1.12	1.62	2.07	1.96	2.44	
Planting .....	.44	.46	.57	.66	.85	.88	
Harvesting .....	1.34	1.38	1.74	2.01	2.59	2.68	
Preparing for market	1.51	1.58	1.96	2.26	2.91	3.02	
Miscellaneous .....	.44	.46	.57	.66	.85	.88	
Total .....	7.13	7.52	9.52	11.23	13.69	14.66	
Yield, bushels.....	30.3	30.1	36.6	34.6	29.4	35.2	
Value per bushel...	.40	.58	.74	.70	.84	.41	
Value per acre.....	12.12	17.45	27.08	24.22	24.69	14.43	
By products .....	1.42	2.02	2.54	2.50	2.70	1.43	
Total per acre.....	13.54	19.47	29.02	26.72	27.39	15.86	
Profit per acre.....	6.41	11.95	20.10	14.49	13.70	1.20	
Value of land.....	52.12	66.56	70.87	77.91	84.71	112.61	
Per cent profit on land .....	12.3	18.0	28.3	17.3	16.1	1.1	
Profit per bushel...	.21	.40	.55	.42	.46	.31	

The special feature of the oats raising in recent years is the relatively smaller profits, which show a less proportional advance than general commodities; the grain being purely domestic and debarred from war use. The advance was more regular, culminating in a gain of 110 per cent in 1919 compared with the 1909 price. The price of the present crop to date shows an average increase of 2 per cent over the pre-war value of the grain. Land values had a more rapid advance than wheat or corn, the best land usually being used for oats. The increase to last year being 122 per cent. The average profit on the land during the war period was 60 per cent. The fall in prices of the present crop shows a loss of 90 per cent from the 1909 crop, and the actual return but 1 per cent on the land investment.

An added reason for the heavy decline in corn and oats was the enormous crops raised last year, both being records. During the war period the average corn crops were below the normal. The average oats crops were above with the exception of 1919, which was responsible for the highest price of the period under review.

It is practically impossible to take up the various states in detail. The variations which make up the average are very wide. It is interesting to consider the results in the states of largest production. For this purpose I have taken Iowa for corn and oats,—this state raising 10 per cent of the oats crop and one-eighth of the corn crop of the country. I have used Kansas for the wheat illustration as the state raises one-sixth of the wheat crop.

Wages in Iowa show an advance of 133 per cent over 1909; the price of the grain relatively about the same as the country over. The speculation in land, on which there have been comments, is shown in an advance of 118 per cent, the jump from 1919 being 30 per cent or \$50 an acre, and much higher prices have been made since. The average return on land values to the corn farmer in this state was 150 per cent over the pre-war valuation, and

apparently the speculator in the past year has lifted prices to this basis. On the crop thus far the return on the land is one-third of that in 1909.

The Iowa showing on corn:

CORN—Iowa							
Per cent labor costs .....	100	114	137	172	203	233	
Year .....	1909	1916	1917	1918	1919	1920	
Fertilizer .....	\$.21	\$.27	\$.31	\$.38	\$.44	\$.51	
Preparation .....	2.15	2.45	2.94	3.70	4.36	5.01	
Seed .....	.33	.33	.48	.51	.52	.55	
Planting .....	.34	.39	.46	.58	.69	.79	
Cultivation .....	1.94	2.11	2.66	3.33	3.94	4.52	
Gathering .....	2.31	2.63	3.16	3.97	4.69	5.38	
Miscellaneous ..	.48	.54	.65	.82	.97	1.12	
Total .....	7.76	8.72	10.66	13.29	15.61	17.88	
Yield per acre, bu.	31.5	36.5	37.0	36.0	41.6	46.0	
Value per bu....	.56	1.20	1.27	1.28	1.36	.49	
Value per acre...	17.64	43.80	46.99	46.08	56.58	22.54	
By products.....	.80	.89	1.09	1.47	1.62	1.86	
Total .....	18.44	44.69	48.08	47.55	58.20	24.40	
Profit per acre...	10.68	35.97	37.42	34.31	42.69	6.52	
Value of land...	101.18	136.35	141.40	155.54	170.69	220.19	
Per cent profit on land.....	10.6	26.4	26.4	22.0	25.1	3.0	
Profit per bushel	.34	.96	1.01	.95	1.02	.14	

The oats showing for Iowa:

OATS—Iowa							
Per cent labor costs .....	100	114	137	172	203	233	
Year .....	1909	1916	1917	1918	1919	1920	
Fertilizer .....	.05	.07	.08	.09	.10	.12	
Preparation .....	1.23	1.30	1.68	2.11	2.50	2.86	
Seed .....	1.20	1.40	1.75	2.41	2.41	2.63	
Planting .....	.37	.42	.50	.63	.75	.87	
Harvesting .....	1.26	1.44	1.74	2.27	2.56	2.93	
Preparing for market .....	1.48	1.69	2.03	2.54	3.00	3.45	
Miscellaneous ...	.42	.48	.57	.72	.85	.98	
Total .....	6.01	6.80	8.35	10.77	12.17	13.84	
Yield bushels....	27.0	37.0	47.0	42.0	34.6	39.0	
Value per bushel.	.35	.53	.69	.69	.75	.33	
Value per acre...	9.45	19.61	32.43	28.98	25.95	12.87	
By products.....	1.30	1.95	2.58	2.58	2.73	1.23	
Total per acre...	10.75	21.56	35.01	35.01	28.68	14.10	
Profit per acre...	4.74	14.76	26.66	24.24	16.51	.26	
Value of land....	99.18	133.63	138.58	152.43	167.28	213.59	
Per cent profit on land .....	5.	11.	19.2	16.0	9.8	0	
Profit per bushel.	.18	.40	.57	.57	.44	.34	

Relatively the oats raising in Iowa was no more remunerative during the war than the average of the country. The labor costs and land values were increased as much as in corn lands. The average return on the land values was increased 140 per cent; the uniform excellent returns on crop yields giving this large return to the higher land values. In the present crop year the profit per acre of oats land figures out 26 cents or practically nothing on the value of the investment, and no return to the producer but that of the labor he put in his crop,—providing he did any of his work.

The Kansas extension of the official prices:

WHEAT—Kansas							
Per cent labor costs .....	100	134	164	218	271	320	
Year .....	1909	1916	1917	1918	1919	1920	
Fertilizers .....	\$.06	\$.08	\$.09	\$.10	\$.12	\$.13	
Preparation .....	1.81	2.43	2.97	3.94	4.90	5.79	
Seed .....	1.22	1.78	2.27	2.66	3.03	2.30	
Planting .....	.41	.55	.67	.89	1.11	1.31	
Harvesting .....	1.49	2.00	2.44	3.25	4.08	4.77	
Preparing for market	1.44	1.93	2.16	3.11	3.90	4.61	
Miscellaneous .....	.45	.60	.74	.98	1.22	1.43	
Total .....	6.88	9.37	11.25	14.96	18.32	20.34	
Yield per acre, bus.	14.5	12.0	12.2	14.1	13.8	15.4	
Value per bushel...	.92	1.70	2.00	2.30	2.85	1.72	
Value per acre...	13.34	20.04	24.40	32.43	38.33	26.48	
Value by products..	.31	.59	.65	.77	.93	.60	
Total per acre.....	13.65	20.63	25.05	33.20	39.26	27.08	
Profit per acre.....	6.77	11.26	13.80	18.24	20.94	3.74	
Land value per acre.	46.00	50.50	52.50	57.50	60.50	69.50	
Per cent earned on land .....	14.7	22.2	26.3	31.7	34.8	5.3	
Profit per bu.....	.46	.94	1.13	1.29	1.51	.24	

The interesting and commendable feature of the extension of the costs of raising wheat in the state of Kansas is the relatively smaller extent of land speculation. The average advance to last year was 50 per cent, or half the average the country over. The profits were excellent to the wheat farmer of that state, as the crops were fairly good, no heavy failure, an accident to which the state is often subjected, and realization of which probably tempered speculation in the land. Lack of labor in that great expanse of fertile soil, and scattered population was another deterrent.

The scarcity of farm hands is shown in an advance of 220 per cent in the costs, as compared with a normal of 100 per cent the country over. Despite this heavy handicap of labor costs, the Kansas wheat farmer had an unexampled prosperity during the war, which helped to earn it the reputation of having bought more automobiles for the number of inhabitants than any other state. The average return on the land values was 100 per cent for the four years 1916-1919. The present crop has not been so profitable, the return being slightly over one-third of the pre-war period.

The tables speak for themselves. The future is never penetrable; if it were, discontent would be more manifest. The war inflation is over, the inflation of all values has ended. There will be a scaling down, and in the readjustment there is apt to be some unusual variations. The grain farmer who held to his large profits during the war period is fortunate; the speculative farmer will suffer more mentally than materially.

The tendency will be towards more moderate farming, and with the slowing down of industry in the cities, a larger farm population, a return to a normal wage,—in fact this latter adjustment has taken place more drastically in the country than in the towns. The stock of domestic grains carried over from last year's heavy crops is not helpful to a price recovery.

The farmer, however, will plant and reap to the best of his ability. He is not idle, and resentment does not kindle a strike against production. His competition will be keener. The accidents of crop failures are too poignant to the producer to run the risk of a small acreage in a period when plenty remains from the previous years. No man knows his Bible better than the farmer, and there are more Josephs than prodigal sons among them.

## CORN FOR EUROPE'S SUFFERERS

The corn donations made by the farmers to the relief of Central Europe and China are on the way. The first car started from Eureka, Ill., on February 21 and on the following day Valparaiso, Ind., made up a car. Other shipments have followed so that a material contribution is already at the disposal of the relief committees.

A meeting was held at Chicago early in February at which all details were arranged. At this meeting were representatives of the American Farm Bureau Federation, which started the movement, the American Corn Millers Association, the elevator associations, the railway associations, the European Relief Committee, and the Polish Relief Committee. All the representatives had power to act, and decided upon the various details in short order.

The county officials of the Farm Bureau make arrangements in each county so that the farmers will each bring in 1½ per cent of his corn crop. This is hauled to the local station where it is shelled free of charge. The shelled grain is then handled by the local elevator and loaded on cars, also free of charge. The railroads then furnish free transportation to the terminal elevator where the grain is dried at a charge of one-half the cost.

The railroads then take the corn again and haul it free to the mills, where it is ground at a charge per bushel of 5 cents less than cost. Once more the railroads take the corn and make no charge for hauling it to the seaport where it is put on ship-board to be taken to foreign countries.

Most of the corn is shipped as grits and corn flour. A shipment of 1,500,000 bushels of unground corn is to be sent to eastern Galicia, where the people are accustomed to grinding the corn and eating it as bread and in other ways. In all about 5,000,000 bushels are expected to be furnished.

SOUTHERN farmers are planting a considerable part of the normal cotton acreage to grain and feed crops.

EUROPE, apparently, has been having about the same weather we have had. Reports from the central countries state that fall sown grain is making premature growth and fears are held that a freeze will do material damage.



PLANT CONSTRUCTION AND DUST  
EXPLOSIONS

(Continued from Page 695)

basement leading to the boot of loft No. 8 was burned for some distance from the hopper, it might have been considered that the explosion started in loft No. 8. However, this could not be considered very seriously in view of the other facts which have been obtained in the course of the investigation. If the explosion had occurred in loft No. 8, instead of loft No. 10, there would have been greater evidence of explosive violence in this loft.

## CONCLUSIONS

From the evidence obtained in the investigation, it would seem that the explosion was the direct result of a choke up, which occurred in loft No. 10 at about 10 minutes or a quarter of 12. The

the primary or original explosion and the other successive explosions which destroyed the plant. It would seem, therefore, that the explosion propagated almost instantly throughout the various sections of the plant, and it is probable that this was largely due to the fact that there was considerable dust lodged on the trough plates in the various bins which was thrown into suspension by the explosion. *On account of the open connection over the top of the bins, the explosion could readily propagate from one bin to another.*

It is also probable that the explosion might have gotten out of loft No. 10 through openings at the head of the loft and have propagated from there throughout the working tower and that portion of the plant above the bin floor. It is quite probable that the explosion did get out there and did propa-

amount of dust which was present in this chamber. If the loft had been a continuous double leg loft instead of having the large loft well, this chamber would have been much smaller. Even with the large chamber there would not have been so much dust if the walls had been perfectly smooth instead of having ledges on which the dust accumulated. With a completely double legged loft or even with a well having smooth sides, it is probable that the original explosion would have been less intense.

It would seem, from the investigation, that if the electric current driving the motor operating loft No. 10 had been shut off as soon as the choke occurred, there would not have been friction at the head of the loft and there would not have been any resulting explosion. It is possible that some installation which would automatically and ef-



WINDOWS ON THE FIRST FLOOR

These windows were "sucked-in" by the explosion. Debris from above in the foreground.



REINFORCED I-BEAMS BENT AND TWISTED BY EXPLOSION

The terrific force of the explosion twisted these 8-inch beams in every conceivable way



DEBRIS ALONG SOUTH SIDE OF ELEVATOR

This twisted steel and broken concrete was thrown from the top of the elevator by the explosion.

choke having been caused in a different manner than the usual elevator chokes in this plant, it was noticed immediately, and consequently the motor was not shut off as soon as the choke occurred but continued to run, thereby driving the head pulley of loft No. 10 which caused it to turn inside the loft belt which could not move because of choke.

This caused considerable friction at the head which was sufficient to cause the belt to begin to smolder. The belt then smoldered for about one hour and 20 minutes until it became so weakened that on account of its weight it parted and dropped down through the legs into the well. In so doing

gate through that section of the plant, possibly in that manner, but from all information which was obtainable, it was evident that the portion of the plant above the bin floor and the working tower, was kept quite clean and it is a question as to whether there was sufficient dust in this portion of the plant to have caused the great damage that resulted from the explosion.

However, it is a well known fact that considerable dust had accumulated on the trough plates in the bins. In fact following the explosion a number of the bins were looked into and it was found that there was still in some cases as much as one inch

fectively stop the motors as soon as the loft belt materially slackens its speed might have prevented this explosion. An installation which might be considered would be a circuit breaker which would be thrown out as soon as there is a definite overload on the motor.

In cases where regulations will not permit of a dust removing and collecting system, consideration might be given to extending the head of the lofts out through the roof, so capping them to keep out the storms but allow for ample ventilation. Where this is not thought advisable some type of vent from the head of the loft to the outside would help in



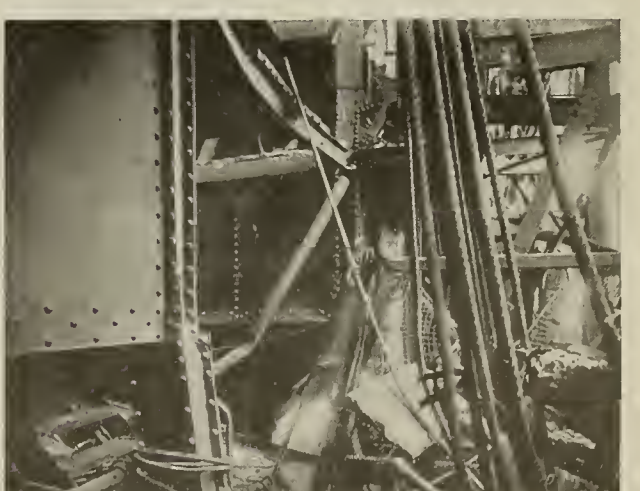
LOOKING DOWN ON TOP OF STORAGE BINS

This view, taken from top of tower, shows how the bin floor and roof over the storage section were entirely blown off. The trough plate construction of the bins shows clearly.



A BROKEN BIN HOPPER

This large piece of concrete fell from the top of the elevator and was driven through a steel bin hopper, much after the order of a huge artillery shell. It gives a graphic idea of the force exerted by the explosion.



TWISTED BEAMS IN TOWER

This view shows some of the twisted beams in the upper portion of the tower. Note the bent uprights on the left.

a dense dust cloud was raised in the legs and well which was ignited by the smoldering or burning ends of the belt.

The original explosion, therefore, started in the well and legs of loft No. 10 and propagated from there throughout the plant. *On account of the peculiar construction of the sides of the bins considerable dust had accumulated on the shelves of these trough plates.* This dust in the bins on the sides of loft No. 10 was thrown into suspension by the force of the original explosion and was ignited by the flame from it which reached these bins either through the small opening at the top of the well, or because the floor over this well was blown off, and thereby made an open connection to the bins on all sides.

There was no evidence which would indicate that there was any appreciable lapse of time between

of dust lodged on some of these plates. It is, therefore, believed that even though the explosion may have propagated throughout the working tower and upper portion of the house from the top of the elevator, the greatest pressure was created and the most disastrous explosion occurred in the bins, or in that practically open room above the bins and beneath the bin floor. It may be quite definitely stated that the real cause of the explosion was the friction at the head of the loft resulting in smoldering of the belt which eventually parted, dropping into the legs and well of the loft, stirring up the dust which was ignited by the smoldering or burning ends of the belt.

## LESSONS DRAWN FROM THE INVESTIGATION

It would appear that the intensity of the original explosion was in part due to the size of the chamber in which this occurred, and partly due to the

getting the dust out of the grain and keeping the elevator clean.

From the investigation it would appear that the original friction which caused the smoldering of the belt occurred at least one hour and 20 minutes before the explosion and that this smoldering continued during this period of time until the belt so weakened that it parted and fell. If there had been some automatic device present in the loft heads which would have extinguished this fire, it is possible that the explosion might not have occurred. One of the automatic devices which has proved effective in extinguishing incipient fires is *Automatic Sprinklers*. With these installed in the heads of the lofts it is probable that fewer such explosions would occur.

It would seem that the intensity and the extent of this explosion was increased on account of the



large amount of dust accumulated on the trough plates in the bins. While it is recognized that this type of construction may have its advantages, it is very hazardous from a dust explosion standpoint because of the ledges or shelves on which the dust may collect. Smooth, plain steel plate sidings would be much safer, making it impossible for dust to collect in the bins.

It seems probable that the explosion propagated from bin to bin through the opening between the top of the bins and the bin floor. If the bins had been extended and the bin floor placed immediately at the top of the bins so that there was no opening or connection between the various bins, but each one entirely separate from all of the others, it is doubtful if the explosion would have been so extensive.

There must be some way of ventilating all storage bins, but connecting them increases the explosion hazard. To take care of this ventilation, which is necessary at the time of filling and of emptying of the bins, consideration might be given to the use of perforated iron covers or grids to the manholes to allow for air to enter or to come out of the bins. If it is not considered that this ventilation is sufficient, galvanized iron ventilators might be run out through the roof from the top of each of the bins.

It would seem that the choke in lofter No. 10 was caused by over feeding at the boot of this lofter rather than by the over filling of the receiving ganners at the head of the elevator, causing back logging of the grain with consequent choke. If there had been some way in which the man in the basement who had control of the feeding of the grain could have been notified that the choke was coming on, it might have been possible for him to have stopped the flow of grain and thereby have prevented the choke.

As a possible means of getting this signal to the man who has control of the feed to the elevators, a suggestion which might be offered for consideration is the possibility of an installation of some type on the idler or guide pulley, which will either make an electrical contact when the belt slows down to a certain speed or will give some other signal which will let the operator know that this belt is slowing up.

## ENGINEERING RESEARCH

The investigations conducted by the U. S. Bureau of Chemistry in connection with the study of grain dust explosions have shown that the construction of the plant has a close relation to the extent of the explosion. In the building of grain elevators and industrial plants where flammable dusts are created during the operating processes construction engineers should give attention to this new development. Further engineering research investigations to develop effective methods for dust collection and control, together with the design of safety equipment, are essential before these disastrous losses to life, grain and property can be prevented.

## CANADA STARTS PROBE

The investigation bug which has been running riot in Washington has crossed the northern border and bitten the legislators of the Dominion. The Canadian Government has announced that it will conduct a thorough investigation into the Winnipeg Grain Exchange and the operations of the grain trade in western Canada.

"We believe that the Grain Exchange as at present organized, is fundamentally sound," said E. S. Parker, a member of the Exchange almost from its inception, and a member of the present council, "and we are prepared to put all the cards on the table, and give the fullest publicity to all its transactions. We will assist the Commission in every way possible. I know that the trade is tired of being called gamblers and parasites, and if there is anything really wrong in the Exchange we want to know all about it. The western grain trade is serving a most needful purpose in the marketing of the enormous grain crops that are produced every year, and if the services rendered are not in the way of honest business, then we are quite willing to get out and let some other person handle it.

J. E. Botterell, past president of the Exchange,

stated as follows: "The Grain Exchange is merely a meeting place for buyer and seller. The country and terminal elevators and the handling of cars of grain on commission are subject to the rules and regulations of the Canadian Grain Act, administered by the Grain Commissioners at Fort William and which reports directly to the Minister of Trade and Commerce at Ottawa. There has been so much talk about the grain trade that a Royal Commission of able men will place the facts before the producers and consumers in such a way that the atmosphere will be cleared once and for all, and if a better system can be evolved as a result of this investigation it would be a good thing for Canada as a whole."

The alleged purposes of the Commission are set forth as follows:

1. The grading and weighing of grain;
2. The receiving, handling and shipping of grain through country elevators and from country points;
3. The operation of grain exchanges by members thereof;
4. The work of grain exchanges;
5. The handling of grain at terminal points;
6. The holding of grain at terminal points;
7. The operation of public and private terminal elevator and eastern public elevators;
8. Operation of the Lake Shippers' Association;
9. Operation of the Northwest Grain Dealers' Association;
10. The trimming of grain at the upper and lower lakes ports, and ocean ports;
11. Lake shipments;
12. The shipment of grain to Atlantic and Pacific ports;
13. The operation of Canadian flour and feed mills.

## COMMITTEE OF 17 SUBMITS PLAN

The Committee of Seventeen of the National Farm Bureau Federation on February 17, formally adopted a plan for marketing grain. The meeting was held at Kansas City with the following members present: C. H. Gustafson of Nebraska, J. M. Anderson of Minnesota, C. A. Bingham of Michigan, P. E. Donnell of Missouri, John L. Boles of Kansas, W. J. Eckhardt of Illinois, C. V. Gregory of Chicago, William Hirth of Missouri, C. H. Hyde of Oklahoma, Dr. E. F. Ladd of North Dakota, George Livingston of Washington, D. C., H. R. Meisch of Minnesota, A. L. Middleton of Iowa, Ralph Snyder of Kansas, L. J. Tabor of Ohio, and Clifford Thorne of Chicago.

The plan, as adopted by the Committee will be submitted to the various affiliated farm organizations for ratification and a meeting of delegates from these organizations will be called as soon as possible by President J. R. Howard.

The plan, according to an official digest issued by the Committee, contemplates the incorporation of a national sales agency in the form of a non-stock, non-profit, grain growers' membership organization which would provide for the marketing of grain by virtue of contracts with farmers' co-operative elevator companies or local co-operative associations to be formed where local farmers' co-operative elevators do not exist.

The national sales agency will provide:

1. Branch sales offices at important grain markets, to handle the grain for each natural grain district.
2. Terminal elevator service in connection with branch sales offices, either by contractual arrangements for same, or through the organization of a company, or companies, which would lease, buy or build terminal elevators.
3. Facilities for financing the marketing of grain by country elevators through the organization of a finance corporation, with capital stock subscribed for by the grower members.
4. Facilities for marketing the exportable surplus of grain through the organization of an export corporation.
5. Service departments furnishing information covering local, national and world-wide conditions, affecting the grain trade, also information and service in connection with transportation, legal, statistical and other problems.

The initial working capital of the national sales agency, with which to provide facilities for the immediate handling of grain, to be secured through the membership subscription of the growers. Sub-

sequent funds to be secured by deduction of a certain percentage of the sales value of all grain sold through its offices.

There are to be two contracts, one running from the grower to the local elevator company or the Grain Growers' Association, and the other from the said local company or association to the central sales agency.

Farmers' co-operative elevator companies, composed of grower-members, on a patronage dividend basis to be asked to contract with the national sales agency for the sale of grain of members of the national organization. Where a farmers' co-operative elevator company meeting these requirements does not exist, a local co-operative association, composed of grower-members only to be organized, and contracts arranged between the national sales agency and such associations for the sale of their grain.

These local co-operative associations to arrange for the use of local elevator facilities, either by contracting with companies now in existence which are not eligible for membership due to their present form of organization, or by arranging to lease, buy or build elevators.

However, a reasonable period of time may be given to local elevator companies to make such necessary changes in their present form of organization as would meet the requirements for doing business through the national sales agency.

A contract between the growers and the local farmers' co-operative elevator company or the local co-operative association would be solicited, providing for the exclusive sale of the grower-members' grain through the sales facilities of the national sales agency. As an alternative, a contract with the growers could be solicited, providing for the pooling locally of the grower-members' grain, and its sale through the national sales agency. The said contracts also will contain provisions authorizing two or more companies to pool their grain, when approved by at least 75 per cent of the members.

The plan provides for handling grain by purchase, on consignment or by pooling, as the growers in any locality may decide. Growers will sign contracts agreeing to deliver all their surplus grain to their local elevator company will run from the local elevator company to the central sales association.

By handling a large volume of grain through their own sales agencies, the farmers hope to check and finally eliminate the speculation and unfair practices by which the terminal grain markets have been manipulated, to their disadvantage. By maintaining a steady flow of grain to the markets throughout the year, by financing the grain movement, with elevator receipts handled by its own finance department, by maintaining its own sales agencies on the grain exchanges, and by handling its own exportable surplus, the new grain marketing organization can, in the opinion of the committee, stabilize prices and prevent the great daily, weekly and seasonal fluctuations, that are so great a hardship to both producer and consumer.

It is not the desire of the Committee to form a grain "trust," according to the Committee. It points out the impossibility of unfair price-fixing by farmers, since unduly high prices quickly defeat themselves by encouraging over production.

Before adjourning, the Committee appointed a sub-committee of seven to perfect organization plans and to call a meeting of all grain marketing organizations to consider the proposed plan. Another sub-committee will propose by-laws and contracts, and submit these to prominent attorneys for approval as to legality. The Committee hopes to have the new marketing system in operation in time to handle a substantial part of the 1921 crop.

THE Union of South Africa has a vast area including the Cape of Good Hope, Natal, The Transvaal, the Orange Free State, and the former territory known as German South West Africa, and is a potential food source whose production may be stated in dazzling figures some day. In it are 229,000,000 acres of valuable farm land with only 14,000,000 under cultivation. Besides there are 2,500,000 acres of irrigable soil, 970,000 of which have been watered. The population, white and black, was estimated in 1917 at 6,850,000.



## NEWS LETTERS

## KANSAS CITY

B. S. BROWN - CORRESPONDENT

**B**ILLS designed to give farmers further advantages in marketing their crops, particularly grain and livestock, developed unexpected strength in the Missouri legislature the latter part of February. Representatives of the Kansas City, St. Louis and St. Joseph exchanges were in daily attendance at Jefferson City endeavoring to secure the defeat of the measures. The bills were sponsored by farmers and their organizations and had unusually strong support. Radical changes were proposed in practically all kinds of markets, with grain exchanges, live stock and produce markets the main objects of the attacks. Grain men were concerned chiefly with a bill which would force them to accept as members the agents of various farm organizations, who would endeavor to handle the shipments of farmers at lower than prevailing commission rates. This would be equivalent to revoking the most stringent rule of the exchange—that dealing with rebates in one form or another—and consequently was vigorously opposed. The bill passed the House and was favorably reported on by the Senate Committee, but met some delay in the Senate. If it is ultimately passed, and it appears probable that it will, the boards of trade probably will attack it through the courts.

James T. Bradshaw, state warehouse commissioner and grain inspector of Missouri, will probably lose his job as the result of the passage of an administration agricultural bill which will consolidate 68 departments under one head. Mr. Bradshaw at first had the help of grain men from Kansas City and St. Louis, but this help vanished when other bills came up in which the exchanges had a more vital interest.

The Midwest Farmers' Terminal Grain Agency, organized at Salina, Kan., recently with a capital of \$1,000,000, announced that it will make its headquarters at Kansas City, with branch offices in Salina, Wichita and Hutchinson. About 250 representatives of farmers' and co-operative elevators took part in the organization. Maurice McAuliffe, one of the organizers said the concern would apply for membership in the Kansas City Board of Trade. The agency expects to handle this year's crop.

Country acceptances of wheat on over night bids have been small the past few weeks. With export demand generally dull and premiums as a rule under a workable basis, terminal dealers have not been inclined to issue firm bids and country shippers have preferred to consign their wheat direct. As a result offerings on the carlot market last month were much larger than in January when receipts were larger but included much grain arriving on contract. Liberal amounts of consigned wheat are en route from Kansas and Oklahoma to Gulf ports, which is being traded in actively.

Wheat receipts at Kansas City in February continued far above the average for this season of the year, though there was a substantial decrease from the January movement which was the largest of the season. The total in February was 4,857 cars, the largest ever reported in February, and compared with 3,121 cars a year ago and a 10-year average of 1,813 cars. Compared with January, there was a decrease of 2,765 cars. Receipts the first week this month were also large and receivers expect a new high record March movement. The corn movement continued small in February, though it showed a tendency to increase the latter part of the month and early in March. The total was 1,304 cars, a decrease of 532 from January, 75 less than a year ago and 866 less than the average. Receipts of oats and Kaffir were moderate.

Few grain dealers at Kansas City appear to have taken seriously the numerous reports regarding green bugs in the Southwest. The reports have been numerous and, with a nervous short interest in the market, they have been a factor in price fluctuations, but no real concern has been apparent. According to the most conservative advices received up to the second week of this month, the bugs have appeared over a wide area of Texas and have been found in scattered parts of Oklahoma and Kansas. In the latter two states there has been no damage whatever worth mentioning and in Texas the damage has been chiefly to volunteer oats. Unseasonably warm weather and

absence of rain have been favorable for the propagation of the pests and have been unfavorable for the development of their enemies, but the situation is no worse than it has been many times before.

Final action on the bill which will allow country elevators in Kansas to issue warehouse receipts has been delayed by technicalities and the measure is not yet in operation. The Kansas legislature has an unusually heavy program. No opposition to the bill has appeared and its prompt passage is predicted once it is brought to a vote. The bill was prepared under the direction of J. S. Hart, state grain inspector, and has the backing of nearly all branches of the grain trade in the state and at Kansas City.

Sentiment regarding wheat prices the last few months of the crop year is still confused at Kansas City. Grain men see much to warrant a belief in both higher and lower prices. The export situation, both past and present, is obviously bullish. Foreigners have taken large quantities of wheat from the Southwest this season and while buying at present is not active additional liberal quantities have been contracted for and will be delivered in the next two or three months. Despite this and the fact that the country movement is irregular, May wheat continues to sell at a discount under March. Early in March the deferred delivery lost some of its discount, the difference dropping to about 3 cents, compared with 10 cents several weeks before.

Joseph P. Griffin, president of the Chicago Board of Trade, was in Kansas City the first week in March, coming here from Omaha. His visit was on private business, he said.

Trade in grain with Mexico has shown a substantial increase since arrangements were made to allow deliveries of exports in American railroad equipment, according to several Kansas City firms that have connections in that country. Until several weeks ago grain intended for Mexico was delivered only to the border where it was reloaded into Mexican equipment. Demand has been chiefly for corn, particularly White, though moderate amounts of wheat, oats and flour have been exported also. Most of the flour orders have been filled by Texas mills. Supplies of native corn in Mexico are small at present which accounts for the good demand. Dealers say further substantial sales to that country are probable.

William C. Kreger of the Kaull Milling Company has been elected a member of the Board of Trade on transfer by certificate from Harry G. Kaull of the same concern.

President Ben L. Hargis of the Board of Trade recently addressed the Department of Economics of the University of Kansas on "Boards of Trade and their Functions." The same evening at a dinner given by the commerce fraternity he spoke on "Grain Speculation vs. Public Welfare."

Harry G. Stevenson of the Stevenson Grain Company was suspended by the directors of the Board of Trade for 10 days for "irregularities and delays in making settlement on two cars of consigned grain."

The Board of Trade gave a dinner at the Hotel Muehlbach February 25 in honor of Signora Olivia Rosetti Agnelli, who was secretary to David Lubin, founder of the International Institute of Agriculture. About 125 members of the exchange attended. Bankers and business men generally were invited. Signora Agnelli spoke on the value of a world wide system of crop reporting.

Initial deliveries on March contracts at Kansas City were 45,000 bushels of wheat. Elevator concerns were active in the carlot market the last few days of February and it was rumored that liberal amounts of wheat would be delivered, but the rumors proved without foundation.

William J. McNeil of the Barnes-Piazek Company, formerly with the Simonds-Shields-Lonsdale Grain Company, is an applicant for membership in the Kansas City Board of Trade. He purchased the membership formerly held by E. R. Welsh, which was taken over by the Exchange at the time of the Orthwein-Matchette failure. The price was \$8,000. A year ago memberships were in demand at \$15,000.

The tariffs filed to become effective March 1 proposing an increase in the proportional rate from Kansas City to New Orleans from 38 cents to 53 cents and numerous other large increases to Memphis, Vicksburg, Natchez and other points in the Mississippi Valley have been suspended by the Interstate Com-

merce Commission until June 28, pending an investigation and hearing, according to a notice received by the Board of Trade Transportation Bureau. The hearing is set for March 21.

The rate of interest on advances this month has been fixed at 7 per cent by the Board of Trade Finance Committee.

## CINCINNATI

HARRY A. KENNY - CORRESPONDENT

**A**FTER rather sluggish trading throughout February, the local wheat market showed evidence of bullish tendencies during the early part of March. The market, however, failed to respond fully to the strong bullish tone which prevailed throughout the country due to outside influences, and seemed reluctant to begin a strong upward trend in the future trading. Prices were nevertheless firmer and somewhat higher. There was little inquiry from the mills, offerings being mostly of grades in split cars. Mills reported slight demand for flour.

In the corn market the receipts maintained a medium high level during February and March. The demand was also good and all receipts not applied to contract were immediately absorbed at steady and firmer prices. Buying for exports was remarkably active, top grades, however, were again scarce and premiums increased with Yellow, in the majority of cases selling above White and Mixed.

The liberal stock of hay on farms tributary to this market was again reflected in the receipts during the month. These largely exceeded requirements in the trade with resulting weakness at the market and some losses averaging between \$1 and \$1.50. The demand was extremely slow and acceptance of offers to the South few. Clover and Alfalfa, however, were scarce with the result that prices were very firm.

G. C. Bender, member of the Exchange, visited his home in Stryker, Ohio, during February.

B. J. Drummond, traffic manager of the Cincinnati Grain and Hay Exchange, attended a conference of grain and traffic representatives at St. Louis on March 5 for the purpose of formulating a plan to have annulled the tariffs issued by the Mississippi railroads on grain. The new rates were to become effective on March 1, but were suspended pending a hearing of the grain interests.

The Ohio Valley Milling & Supply Company, of Ashland, Ky., near Cincinnati, recently increased its capital from \$50,000 to \$99,000. Many Cincinnati are interested in the corporation.

B. J. Drummond, traffic manager of the local Exchange, recently suggested that the Eastern executives of railway traffic, who are considering a proposal of the Transportation Committee of the Federal Highway Council to make greater use of the motor trucks for store-door delivery, should also consider the use of detachable truck bodies such as are used in Cincinnati. "One of these truck bodies," he said, "loaded at the store door, placed on a suitable car and transported to another city, and there placed on a truck chassis and hauled to the store door for unloading would eliminate much of the congestion at freight stations and reduce the amount of labor in handling the freight. Many jobbers are in a position to load several of these bodies daily."

Joseph H. Wolf, 82 years old, retired grain and feed merchant, died at his home, 2159 Central Avenue, on March 7. He was the founder of the Gardeners' Union Beneficial Association. Two sons, Herman Wolf, Washington, D. C., and Joseph Wolf, Cincinnati, and a daughter, Mrs. Louisa Collet, survive.

A movement has been launched by milling interests in Cincinnati, north and west of St. Louis, to appeal to the Interstate Commerce Commission to abolish the present "any quantity" rates on grain products applying from Ohio and Mississippi River crossings to the Southeast and Carolina territory. No date has been set for a conference on the proposal, but it is presumed that the case will be brought to the attention of the Commission as soon as possible. The Southern millers resist the elimination of these rates, maintaining that they are necessary to the economic distribution of their products in the South.

The reduction of \$5,000,000,000 in the value of farm products in 1920 as compared with 1919 means to the business men of the United States the loss of many hundred millions in orders, a fact which accounts largely for the present industrial depression in the United States, resulting in the unemployment of fully 3,000,000 people. This assertion was made by E. T. Meredith, Secretary of Agriculture, to an audience of grain producers at the Sinton Hotel last month. Regarding some of the achievements of the



Department of Agriculture, Mr. Meredith said: "We spend \$250,000 establishing Durum wheat in this country and \$50,000,000 worth is now produced annually. We spend less than \$200,000 introducing rice in California and the rice crop is now worth \$21,000,000. We spend a few thousand dollars introducing grain and forage sorghums in the Southwest, where corn does not always succeed and last year 125,000,000 bushels of Kaffir and other grain sorghums were produced." Secretary Meredith also discussed the current subjects now engrossing the Department of Agriculture, including good roads, rural credits and the financing of export trade. The meeting was attended by 300 business men, including farmers, commission merchants and grain and hay dealers.

Van Leunen & Company, receivers and shippers of hay and grain, have moved from their present location in the Mitchell Building to new quarters in the Neave Building, Sixth and Race Streets. The new offices are centrally located and of easy access to the plugging tracks and the Cincinnati Grain and Hay Exchange.

Fred Winkler of the Mutual Commission Company has returned from a successful Southern business trip.

Safe robbers broke into the office of Seelmeyer-Fox Grain Company, local feed dealers and broke the combination off the safe. Combination tumblers were punched out and the door was opened. The yeggs obtained \$15 and some valuable papers.

Mrs. Jane Drake, widow of Marshall T. Drake, former Cincinnati seed merchant, died last month at Winter Park, Fla. She was a sister of J. Charles McCullough, president of J. Charles McCullough Seed Company.

Standing committees of the Cincinnati Grain and Hay Exchange for the year of 1921 were appointed by the Board of Directors of the organization on March 1.

A delegation consisting of representatives from the largest hay and grain firms of Cincinnati returned recently from attending the convention of the Farmers Grain Dealers Association, of Indiana, at Wabash, Ind., on Thursday and Friday, March 3 and 4. The need of greater cooperation between the producer and the trader was detailed to those attending the sessions of the organization.

E. B. Terry, manager of the Early & Daniel Company, is back at his desk after a brief business trip to Indianapolis, Ind.

Friends of Thomas M. Dugan of the Nutritia Company, are delighted to see him back on the job after an absence of about two months. He underwent an operation and rallied nicely.

At a recent meeting the Board of Directors of Cincinnati Grain and Hay Exchange adopted a resolution protesting against the abolition of the office of John A. Morris, director of the Cincinnati railroad terminals. The organization protests on the grounds that Mr. Morris has been largely responsible for the lack of congestion in the local yards. His deposition would cause stagnation of business here, they say.

H. M. Bronse, president of the Cincinnati Grain and Hay Exchange delivered an address on "Terminal Markets and Their Relation to Country Elevators" at the annual meeting of the Farmers' Cooperative Grain Dealers of Ohio at Cleveland on February 22 and 23. A delegation of Cincinnati grain dealers attended and reported on their return that much progress had been made.

C. E. Jones, of the St. Paul Milling Company, visited here last month as the guest of "Jack" Gartner of the D. O. Cross Company.

The Cincinnati Grain and Hay Exchange decided recently to post reports of exports of grain at the United States ports, compiled by the Bureau of Markets from the official reports of licensed grain inspectors, on the bulletin board of the headquarters here. William L. Ingles, director of the local office of the Bureau, is to supply the press with copies of the reports.

E. E. Dannemann, local flour broker, returned on March 1 from an extended tour in the cities of the Western Coast. He spent several weeks in Seattle.

D. W. Hopkins, of the Mutual Commission Company, has returned to his grain trade duties after an enjoyable vacation of two weeks spent with a party of friends in Florida.

G. A. Collier, representative of the Hay, Feed and Seed Marketing Service, of the Bureau of Markets at Washington, was a visitor at the Cincinnati Hay and Grain Exchange last month in the interests of the Bureau's efforts to institute Federal grading of hay. He obtained several samples of hay from lo-

cal warehouses before departing for Indianapolis. Mr. Collier has a large acquaintance in this city, where he was formerly in the grain and hay business under the firm name of G. A. Collier & Co.

The embargo on hay shipments to Cincinnati, recently established by the Pennsylvania and West End Roads, was lifted on February 17 and liberal consignments are again invited. The congestion of cars in the terminal was reduced from 200 to 20 in less than five days.

Trading on the Cincinnati Grain and Hay Exchange was suspended on both Lincoln's and Washington's birthdays, but operations on the hay plugging tracks were continued as a means of eliminating the heavy congestion. Extra works on these days aided materially in the freeing of the tracks from congestion.

A. Bender, of the Bender Grain Company, has been passing out the Perfectoes incident to the birth of his first grandchild born to the wife of his oldest son, Ray Bender, manager of the grain department of the Alfred Hill & Co., brokers.

Earl F. Kramer, of the Kramer Estates, feed dealers, has returned from a Southern business trip.

Max Blumenthal is handling a liberal percentage of the barley consignments to this market.

Ray J. Herzog, who for several years was connected with the Cleveland Milling Company here, has resigned.

Samuel Bingham, of the Bingham-Scholl Grain Company, is enjoying a fortnight vacation in the East. Elmer Voss, secretary of the company, is attending to his duties.

## MILWAUKEE C. O. SKINROOD - CORRESPONDENT

**A** GAIN it looks as though there is a loosening up of grain on the part of the farmers, although the trade is still so irregular that larger offerings for one week may be followed by a decisive slump in supply for the next week. For the present, however, it appears that grain sales have increased quite materially. For the first week of March, the Milwaukee Chamber of Commerce reported total offerings of 777 cars, compared with 463 cars the week before, 649 cars for the same week a year ago and 554 cars for the corresponding week of 1919.

These figures suggest that the increase over the previous week was almost 50 per cent, while very material gains were scored over the record made for the corresponding weeks of 1920 and of 1919.

Offerings for the first week of March included 90 ears of barley, 525 cars of corn, 73 ears of oats, 64 cars of wheat, 21 ears of rye and four cars of flax. This shows that the receipts are about 70 per cent corn, with smaller amounts of barley, oats, rye and wheat.

Secretary Harry A. Plumb of the Milwaukee Chamber of Commerce says that receipts of grain have shown a large gain, at least temporarily. He asserts that time only will tell if these receipts are to go on at the enlarged rate.

Slight gains in cash grain prices have been the rule for the past few days at the Milwaukee Chamber of Commerce. In the first week of March, wheat went up 3 cents on the average, rye and oats went up 1½ cents each, corn rose 1½ to 2 cents and the barley trade was firm.

The Federal Trade Commission reports that Milwaukee has among the largest memberships of the boards of trade in the United States, with the exception of St. Louis and Chicago. While Chicago had 1,620 members and St. Louis 942, Milwaukee came next with 534, followed by Minneapolis with 461 and other cities ranging from 100 to 300 members. The number of memberships at Milwaukee is steadily being reduced by purchase and cancellation, so that memberships are growing more valuable at all times in the local organization.

Milwaukee has again climbed back to her position as the third largest primary market for the receipts of corn, being surpassed only by Chicago and St. Louis. A year ago, at the corresponding period of the crop year, Milwaukee stood sixth as a corn receiving center being surpassed by five other cities. A year ago, not only Chicago and St. Louis were ahead of Milwaukee in large corn receipts, but Omaha, Peoria and Indianapolis also outranked this city. Milwaukee has always been a popular place to sell corn because of the shipping facilities of this city and because millions of bushels of corn are needed to keep the Milwaukee industries going. On the crop

of 1920, Milwaukee has received to date more than 7,000,000 bushels of corn, while St. Louis reports receipts of a little more than 8,000,000 bushels. The quality of corn received at Milwaukee has been excellent with much of the supply grading No. 4. Spring work, with farmers busy plowing and planting, is expected to hamper the marketing of corn for shipment to Milwaukee as well as to other cities.

Grain in store at Milwaukee at the close of business March 5 was 133,000 bushels of wheat, in round numbers, 652,000 bushels of corn, 591,000 bushels of oats, 126,000 bushels of barley, and 54,000 bushels of rye.

Milwaukee grain men have been notified that in all probability this year will see the earliest opening of navigation in the records of the Great Lakes. This is due to the exceptionally mild weather which has just been experienced. It is believed that ore carriers will be moving as early as April 1. The earliest previous movements of inter-lake boats was April 4, about 10 years ago.

One of the largest lines to operate on the Great Lakes is that of the Pickands-Mather Steamship Company. According to Capt. Peter M. Cartwright at Milwaukee, who is in charge of all the vessels on that line wintering on Lake Michigan, no orders to fit out have been received as yet, because most of this work was done before the vessels were put up last December. It is said that it will take only two or three days to fit out most of these steamers and make them ready for service. During the past season 24 vessels wintered at Milwaukee. Other steamship lines report orders to get ready for exceptionally early sailing. This is expected to mean a very active movement of grain on the lakes out of Milwaukee.

The railroads are apparently rapidly repairing their cars so that they will be in first class shape soon to haul grain without the usual losses from leakage. Practically every month has shown progress in this direction. In June last year 37 per cent of the grain cars arriving in Milwaukee showed some degree of leakage. In July this had been cut to 36 per cent of the total. In August 33 per cent of the cars leaked. In September the ratio was cut down to 32 per cent. October it was down to 31 per cent of the aggregate. In November there was a decided improvement when the ratio of leaking cars dropped to 25 per cent. In December it again declined to 18 per cent and in January to 17 per cent. Thus the percentage of grain leakage has been cut in half in about six or seven months. The ratio has dropped in all from 37 to 17 per cent as compared with an average for that period of 29 per cent. The railroads promise that the ratio of cars leaking grain will be steadily reduced still further in the months to come. The light movement of grain has given roads an unusual opportunity to repair their cars.

Despite the prohibition law in the United States, it seems that there is still demand for knowledge of brewing, which may have its bearing on the great barley industry of the Northwest. Hantke's Brewers' school and laboratories at 200-210 Pleasant Street, Milwaukee, announce that they will continue operation, that new demands on the school have necessitated increased facilities in the laboratory department and that the school will continue its training courses. Apparently, brewing is not defunct if a brewers' school still yields profits in 1921.

Plans have been broached to put the new Chamber of Commerce building in the new Milwaukee Civic Center. By the widening of State, Cedar and Martin Streets, a great thoroughfare will be stretched through the city, east to west, along which will be placed the new soldiers' Memorial and other important structures. The Auditorium, covering one square block, is already placed in this center. It is proposed to put the new Chamber of Commerce building on this site setting back from the river with a plaza between. It is also proposed to build several decorative bridges over the Milwaukee River and close it to traffic because it serves only a few concerns.

The movement of rye to Milwaukee continues light, while the demand for milling, as well as for shipping purposes, is strong and active. Dealers here report that the supplies of rye left back in the country are light and that stocks everywhere are only moderate, the visible supply at the present time being much smaller than is usual at this season of the year.

The figures of the weighing department of the Chamber of Commerce of Milwaukee tell a clear story of heavier loading of cars in certain directions. The average loading of wheat in 1920 was 1,350 bushels per car, which was exactly the same as in 1919. The average car load of corn was 1,425 bushels in 1920, also the identical figure of 1919. The average of oats loading was 2,115 bushels for 1920, a gain of 95 bushels over 1919. The barley average was 1,545 bushels for 1920, exactly the same as 1919. The average car load of rye in 1920 was 1,390 bushels,



a gain of 25 bushels over the preceding year. Summarizing these returns indicate that the average car load of oats has increased 95 bushels in one year and the average car load of rye has been increased by 25 bushels, while all the other grains are unchanged in loading averages.

Among the new members of the Chamber of Commerce of Milwaukee are W. C. Nicholson, manager of the Plankinton Packing Company.

The barley market of Milwaukee is said to be showing steady improvement with light offerings, and all grades are wanted. Price range is steadily becoming narrower. A steady demand for barley is reported from the pearlers, who want only the choicest grades, while maltsters and shippers are also buying steadily. In short, there is an eager demand for all kinds of barley at the present time.

A banquet and special honor has been shown to Prof. R. A. Moore, at the University of Wisconsin College of Agriculture. Mr. Moore is by all odds the greatest grain expert the state has, his specialty being the production of new strains of seeds which are especially adapted to this climate. Prof. Moore is known as the daddy of the short course in agriculture, which is the course for practical farmers each winter and only lasts a few weeks. He is also the founder of the Wisconsin Experiment Association. The banquet was held in connection with a marketing conference at Madison, Wis., to celebrate the 25th anniversary of Prof. Moore's service for the university and the state.

When Prof. Moore started in 1898, the state was afflicted with "scrub" grains which often did not yield the cost of planting and corn would not always harden and mature because the season was too short. Prof. Moore started out by introducing a strain of barley from Canada, selecting the best plants over a series of years. He succeeded thereby in producing the Oderbrucker barley which is pronounced the highest yielding barley in the United States. For this feat Prof. Moore became known as "the man who gave barley a college education."

In the line of corn Prof. Moore also achieved phenomenal results, his two new strains, the Golden Glow and the Silver King, not only maturing easily in colder climates but producing more corn to the acre on the average than the corns used in Iowa. One of Prof. Moore's latest feats is to introduce a new strain of dent corn which will ripen in the most northern of Wisconsin's counties.

One of the great factors in trying out the new seeds has been the Wisconsin Experiment Association started by Prof. Moore which has members in all parts of the state—several thousand in all. Through this group of farmers the new seeds have been distributed in every corner of the state and the great bulk of farmers get the vast benefit from the new strains of seeds. Prof. Moore was born in Kewaunee County in 1861 and was educated at Oshkosh Normal and the University of Wisconsin.

Wisconsin reports almost 50 per cent larger stocks of barley than a year ago on the farms of the state, the figures being 5,251,000 bushels for 1921 and 3,829,000 bushels for the corresponding time a year ago. Some western states like South Dakota and Minnesota, tributary to the Milwaukee market, report in several instances almost twice, or more than twice as much barley on hand now as was carried on farms a year ago.

As an instance of the hard straits of the railroads at the present time and how they are handicapped in providing service, President H. E. Byram of the Chicago, Milwaukee and St. Paul lines declared that the company is buying nothing but necessities and using up all the stocks of materials that it has on hand. President Byram declared further that the company has no plans whatever at this time for improvements and cannot have as long as the money market is on 8 per cent basis.

Asked concerning a rate reduction, Mr. Byram asserted that nothing can be done in the way of cutting freights until business revives, until there is more to ship and until there has been some readjustment downward in the railroad wage scale. He stated that the railroad man wants a large volume of traffic rather than high rates and that it might be better to have a large volume of freights and low rates rather than normal traffic at high rates. As business now stands, he says the freight rate does not make much difference.

Ex-Gov. W. L. Harding, Iowa, made a forceful address in Milwaukee, boasting the St. Lawrence deep waterway route. He declared that since the country could not move down to the ocean, the ocean could be moved back to the country by means of this waterway. He argued that water transportation is about five times less costly than transportation by rail, and that the natural way of hauling—by water—is least developed in this country. Every dollar of unnecessary money paid for haulage, he said, is a heavy tax on the consumer. Grain can be hauled to Boston five cents cheaper a bushel by water than by rail, continued Mr. Harding. He referred to the fact that

Argentina can reach Boston easily with grain because of the all-water haul. With the new canal, he said, the railroads will be relieved each fall of a part of their heavy burden of moving the nation's grain. Mr. Harding also referred to the fact that the new deep waterway route would save 24,000,000 tons of coal a year by the development of the water powers of the St. Lawrence River.

There has been a drastic loss in the size of grain loadings, according to the weekly loading figures of the Chicago, Milwaukee & St. Paul Railroad. In one week the loading of grain and millstuffs was 2,593 cars, a decrease of 1,861 carloads from the corresponding week a year ago. This indicates that the drop in grain and millstuffs loading is about 40 per cent. In general the road reported a drop in cars loaded from 36,000 to 24,000, or about one-third.

The Donahue-Stratton Company will lease the Rialto Elevator of 1,600,000 bushels capacity to take the place of Elevator "A," which burned January 25. The Rialto is at the foot of Broadway and is owned by the Chicago and Northwestern Railway.

There is some talk in Milwaukee of discriminating against New York as a shipping point in retaliation for the objections of New York to the St. Lawrence deep waterway project. The Milwaukee Association of Commerce is considering this plan for recommendation to the shippers among its 3,600 members.

Fond du Lac is after the 1922 grain show of the Wisconsin Experiment Association. Madison was said to draw the same people each year, while the attendance at La Crosse the past year was said to be disappointing.

## TOLEDO C. O. BARNHOUSE - CORRESPONDENT

THE cash grain situation here in Toledo is pretty dull. The receipts are small, but supplies are quite plentiful to take care of the poor demand and then some. Cash grain men say they have shaded their offers 1½ to 2 cents per bushel in order to make sales and where in normal times acceptances of 20 to 25 cars would result they sell a measly car or two. The almost impassable condition of the highways in the country prevents much of a movement to market, but as it is there is more coming than can be well taken care of by the indifferent demand.

We are just starting into the season when the handling of shelled corn is a hazardous proposition, and cash handlers will fight shy of it as much as possible, only taking what they need to fill their sales. This cannot help but have a depressing effect upon an already weak market. There will be no risk in carrying the oats, but as they follow the corn and wheat markets they will undoubtedly suffer the same as corn, only in a lesser degree. There has been some improvement in the demand for flour and feed over the fore part of the month, consequently the millers have been picking up some wheat and it has not been stacking up in public places like the corn and oats.

The recent strength in the wheat market has stimulated shipments very much. One Toledo mill reports having bought more wheat from the country in the last two weeks than they bought from the same source in the previous two months. It totaled quite a large amount, too. We are, however, entering the time of the year when the farmers will have their spring seeding to look after and we can look for smaller receipts from the farms until after corn is planted, when there will likely be a week or two of large receipts. From the large carryover indicated by the government of farm reserves, the farmers will be kept busy all their spare time to market the grain they are still holding back.

Toledo stocks on March 10 were: Wheat, 562,000; corn, 189,000; oats, 581,000; rye, 29,000. Year ago: Wheat, 944,000; corn, 41,000; oats, 83,000, and rye, 179,000.

The Toledo grain market has been quite active. No. 2 Red wheat has ranged from \$1.75 to \$1.97, No. 3 Yellow corn .62 to .75, No. 2 White oats .41 to .50½, and No. 2 rye \$1.41 to \$1.61. Present prices are No. 2 Red wheat \$1.84, No. 3 Yellow corn .72, No. 2 White oats .50, and No. 2 rye \$1.57. Receipts for the month are: Wheat, 215,000 bushels; corn, 261,000; oats, 267,000, and rye, 39,000. Shipments wheat, 136,500; corn, 155,500; oats, 260,100.

The Northwestern Ohio Farmers Grain Dealers Association held a meeting at Stryker, Ohio, on March 7. A large number of the Toledo grain dealers and others interested in the grain trade left here on a special car on the Toledo & Indiana railroad. After partaking of a splendid dinner given by the Stryker Elevator Company a very interesting session was held. Particular attention was given by the country deal-

ers present to getting a better understanding of the present situation in the trade and laying plans for better results in the future.

Edward Fabel, grain dealer of Swanton, Ohio, was a visitor on the Toledo Produce Exchange last week.

The Toledo Produce Exchange Traffic Club held their March meeting on the 11th at the Elks' Club. It was featured by a dinner, followed by the business session.

## PHILADELPHIA T. A. SIEBER - CORRESPONDENT

ACCORDING to the monthly report of the statistician of the Commercial Exchange, the stocks of grain in public warehouses in Philadelphia on March 1 were: 1,029,190 bushels wheat, 1,056,078 bushels corn, and 259,962 bushels oats, compared with 1,434,356 bushels wheat, 459,517 bushels corn and 328,067 bushels oats on February 1 and 343,209 bushels wheat, 188,804 bushels corn and 230,069 bushels oats on March 1, 1920. Receipts of grain at Philadelphia during the month of March were: 838,603 bushels wheat, 1,601,225 bushels corn, 122,028 bushels oats, 107,836 bushels rye. Exports from this port during the month of February were: 956,486 bushels wheat, 903,439 bushels corn, 51,476 bushels rye and 8,333 bushels barley.

New memberships in the Commercial Exchange have been petitioned for during the past month by the Parker Commission Company, 417 Lafayette Building; the Buffalo Flour Milling Company, flour brokers, 4th and Market Streets; the New York Central Railway Company, Denckla Building, all located at Philadelphia; James A. Dawes, grain and feed dealer, Hightstown, N. J., and Fisher and Nolan, grain, feed and flour merchants, Malvern, Pa.

On and after March 1 the Girard Point Elevator Company and the Philadelphia Grain Elevator Company declined to receive orders for the drying of corn to 12 per cent moisture content.

According to a bulletin of the State Department of Agriculture the wheat crop of Pennsylvania for 1920 was 26,774,760 bushels. The "five million bushel class" are Lancaster County, which leads with 2,905,668 bushels, and York, Berks, Franklin and Cumberland next in order. Adams and Chester raised over 900,000 bushels.

Farm labor is plentiful in the Moorestown, N. J., section and at much lower wages than since the pre-war period, according to one of the agents of the Bureau of Farm Management of the United States Department of Agriculture, who has been making an investigation in southern New Jersey. In 1920 the average wages paid per month was \$65 and this has fallen to \$50, with the prospect of going as low as \$40 this spring. Before the entrance of America into the war the same class of farm labor was paid \$30 to \$35.

R. Raymond Tybout, chemist, 211 S. 13th Street, and the Philadelphia Grain & Feed Company, 403 Sansom Street, both located in Philadelphia, were elected to membership in the Commercial Exchange at a meeting of the Board of Directors of that Association.

Arkell & Smiths, bag manufacturers, have moved their Philadelphia offices to 332 Bourse Building, Philadelphia.

Charles Schaal, grain and feed merchant of Philadelphia, died February 24 at his home, 818 N. 63rd Street, due to a stroke of paralysis. Mr. Schaal operated a mill and elevator at the Pine Street Wharf, Schuylkill River, for 35 years, having entered the business when a young man. He was a member of the Commercial Exchange for 31 years and prominent in Masonry. He is survived by a widow, three sons and a daughter.

M. F. Baringer, feed dealer, and Mrs. Baringer, recently left for Florida where they expect to stay until April.

George A. Magee, head of the firm of George A. Magee & Co., receivers and shippers of grain, and wife, has returned from Atlantic City, N. J., where he was recuperating after an illness of about three weeks.

The Commercial Exchange, Philadelphia Bourse, Board of Trade, Chamber of Commerce and the City of Philadelphia have joined together in opposing before the Interstate Commerce Commission at Washington, D. C., the rates proposed by the Southern and Pacific Company and the Morgan Lines interest for



service through the port of New York to points south. The new tariff, recently filed, but since suspended, provides for the absorption of the differential at present existing in favor of Philadelphia from points east of the Alleghenies, and if permitted to go into effect would probably mean the withdrawal of the Southern Steamship Company from this city and otherwise be detrimental to the port of Philadelphia.

The hay warehouse of Charles Henry, Willow Grove, Pa., was completely destroyed by fire recently together with about 50 tons of hay which was stored in the building. The loss is estimated at \$60,000.

The army piers and storage depots at Oregon Avenue, offered the city by the War Department and which were to have been used for the exporting of flour, have been rejected by Mayor Moore. Claiming the restrictions would entail an annual expenditure of \$750,000 the Mayor withdrew the city's offer from further consideration by the War Department in a letter to Brigadier General W. D. Conner, chief of the transportation service. "There was nothing else for the city to do," said the Mayor. "The city was willing to consider purchase or rental. The Government imposed restrictions we thought unfair and unreasonable."

The number of cars unloaded during February at Girard Point Elevator was 56 wheat, 765 corn and 32 rye; at Port Richmond Elevator: 466 wheat, 156 corn, 11 barley and 1 rye; at Twentieth Street Elevator: 12 corn, 20 oats, 1 barley, 1 buckwheat and 1 peas.

## DULUTH

S. J. SCHULTE - - CORRESPONDENT

ADVICES of elevator men and operators on this market are to the effect that a considerable quantity of wheat and coarse grains is still being carried by farmers over this territory. That situation was confirmed by W. W. Blecher, who has returned from a trip over a considerable area of North Dakota. He found that farmers with grain on their farms are now showing more of a disposition to sell, and that they are ready to let go on any firm spots that may develop during the next few weeks.

Operators here assert that farmers over the Northwest are finding themselves confronted by a serious and an unusual condition, in that many of them have obtained loans for more than the present values of their wheat, either from the banks or through interior elevator interests. Some of the latter again have obtained such advances from the terminal elevator companies. Under that condition farmers are asserted to feel that it is not to their advantage to sell, and many of those who have made advances have been slow in liquidating the loans and recording losses. The situation is conceded to have been created through the mistaken attitude of farmers in refusing to sell early last fall when much higher prices might have been realized.

The Duluth Board of Trade membership of George Dion has been transferred to J. N. McKindley of the Hallett & Carey Company and the membership of E. J. Wenzel has been transferred to R. M. Sellwood. The Simons, Day & Co., of Chicago, has been granted a corporate membership on the Board. Beyond the above, no changes in business firms or commission houses have been noted on the Duluth market during the last month.

M. M. McCabe, of McCabe Bros. Company, has been elected a member of the Board of Trade's Arbitration Committee to fill the vacancy brought about through the election of W. W. Bradbury to the Board of Directors.

Old operators on the Duluth market learned with regret of the death at Minneapolis on March 5 of James Geggie. While a resident of Duluth he was connected with the Spencer-Moore Grain Company and he removed to Minneapolis 20 years ago. At the time of his death he was connected with E. S. Woodworth & Co., grain dealers there.

Frank W. Falk, one of the younger generation of operators on the Duluth market, left recently for California, where his marriage to a daughter of A. W. Frick, a former president of the Duluth Board of Trade, is scheduled to take place in the near future.

The Duluth Traffic Commission is grappling with the situation created by the attempt of the Minneapolis & St. Louis Railway to raise its rate on grain and flour shipped from Omaha territory to Duluth. Under a ruling of the Interstate Commerce Commission last spring, the grain freight rates between Omaha and Chicago, and Omaha and Duluth were made equal. By means of supplementary tariff, however, the rail-

road preferred to make an arbitrary increase of 7½ cents a hundredweight on grain and 8 cents on flour, claiming that they were unable to obtain a satisfactory division from the roads connecting Minneapolis and Duluth. Millers of Minneapolis and southern Minnesota joined in the protest heard recently before Commissioner Jewell of the Interstate Commerce Commission. Members of the trade here are hopeful that the railroad's contention will not be upheld, and that the original rate will be ordered to be made effective. A decision is looked for shortly.

Spring wheat from the Canadian West is continuing to move in good volume to this market, the daily average of cars handled being around 60. That movement has been affording the elevators here some business during a dull period. The bulk of that wheat has been going forward to Minneapolis millers, but some of it is being taken daily by the two milling companies here. Advances of Duluth commission houses with Winnipeg connections are to the effect that the movement is likely to be maintained for some time yet, some say practically up till the opening of the lake navigation season. The trade is being handled mainly by the Glohe and the Great Northern Elevator Companies.

Oats trade has also been helping out commission houses here during the dull season. The growth of that trade during the last few months was indicated in receipts of 976,000 bushels during February, bringing the aggregate amount on store in the elevators here up to over 4,200,000 bushels. That trade was made possible through the revision in freight rates a year ago, enabling operators here to reach out into a wider territory. Practically all the oats coming in have been taken by the elevator companies who have been enabled to hedge them on a basis to net good carrying charges. Few oats have thus far been disposed of in the East by operators, but a demand sufficient to take care of all supplies here is expected to develop after the opening of the lake navigation season. It is thought interesting to note that No. 3 White oats at around 42 cents are practically on the same price basis as a month ago.

Duluth operators do not look for any serious results when the future trading bill as amended and passed by the Minnesota State Legislature goes into effect. Gratification was expressed by grain men here over the action taken at the recent Farmers' Grain Grain Dealers' convention held at Jamestown, N. D., in passing a resolution protesting against the putting through of any Federal or state legislation that might seriously interfere with the present marketing machinery. It was feared by the delegates at the convention that the passing of the Wilkinson Bill or any other legislation by the Minnesota state legislature might be disastrous to the grain-growing interests of the Northwest. It was suggested that the Minnesota legislature should leave the present marketing system alone until a better system is devised and adopted by the farmers' organizations.

Dealers on this market specializing in feeds are of the opinion that current quotations in corn are out of line with wheat and rye, and that as a result the planting of corn may be curtailed substantially next spring in the northern portions of the territory into which it had been working. Commenting upon that condition, R. M. White of the White Grain Company pointed out that carloads of a fine grade of corn were offered during the last few days at a basis of around a cent a pound. With heavy freight rates to be deducted, he thought it could be figured that the margin left for the grower must necessarily be small, especially if grown upon high-priced farm lands. Mr. White asserted that with the dairying industry in northern Minnesota showing expansion, his firm has been doing a fair trade in feeds over the territory. Demand for Eastern shipment had been practically nil, however.

With trade conditions as they are, no extensions or material improvements are contemplated by Duluth elevator interests this year. It is figured out that the elevator capacity at the Head of the Lakes is sufficient to take care of any traffic likely to develop within the next year or two. It is understood, however, that one of the companies leasing an old type of elevator at Superior stands ready to build a modern house of its own as soon as building and other conditions are thought to have been sufficiently adjusted to warrant carrying through the undertaking.

For the present crop year from August 1 last up to the present, the movement of all grains on the Duluth market has aggregated 56,500,000 bushels, as compared with 24,900,000 bushels up to the same period last year. Of that wheat has accounted for 34,100,000 bushels as against only 10,800,000 bushels up to the same time a year ago.

Julius H. Barnes expressed the opinion in the course of a recent interview in Duluth that the new administration at Washington would make a grave mistake were it to pass legislation imposing a high tariff upon wheat or other grains. Farmers in ask-

ing for such restrictions should remember that the price of wheat is governed by the world's markets. As long as the United States is a grain exporting country, it must sell its products in competition with those of other countries. The shutting out of wheat from Canada would only work injury to the domestic consumer through raising the cost of his flour, while at the same time it would not confer any benefit upon the farmer, he said.

## NEW YORK

C. K. TRAFTON - - CORRESPONDENT

GEORGE A. Carruthers, son of James Carruthers, head of the large grain house of James Carruthers & Co., Ltd., Montreal, Winnipeg, and New York, is among this month's applicants for membership in the New York Produce Exchange. Mr. Carruthers won a commission as lieutenant-colonel because of his excellent service with the Canadian forces in France.

C. A. Robinson of the local grain firm of Robinson & Sweet, familiarly called "Gus" by his many friends, not only in the local market, but in Chicago and Winnipeg, where he is well known, left for Europe late in February and will spend possibly three months traveling, chiefly in Switzerland and southern Europe.

W. J. Robson of the Wheat Export Company, Inc., has been elected to membership in the New York Produce Exchange to succeed Fred Harrison, who has returned to England. The departure of Mr. Harrison indicated that the work for which the Wheat Export Company was organized is virtually terminated and therefore Mr. Robson will have comparatively little to do excepting to wind up the affairs of the company.

Alfred T. Martin, for many years an active and popular member of the local grain trade, but in recent years located on the Chicago Board of Trade as a member of the large commission firm of Bartlett Frazier Company, spent a few days recently with his many old friends on the New York Produce Exchange, of which he is still a member. Mr. Martin expressed the opinion that prices for grain in general have been ruling too high. In his judgment, there was little or no warrant for the recent upturns. He declares that farmers have been holding back their grain, but thinks they will soon be compelled to unload.

Carlo C. Ruggieri, agent for the Italian Food Administration, has made application for membership in the New York Produce Exchange.

Frank Cowgill, who was elected to membership in the New York Produce Exchange early this month, has succeeded E. Newman Giles as assistant to Fred M. Bennett, manager of the local office of Lamson Bros. & Co., the well-known commission firm of the Chicago Board of Trade. Mr. Giles, who recently married Mr. Bennett's daughter, was made manager of the firm's offices in Buffalo, N. Y.

John Melady of the Melady Grain Company of this city left the Produce Exchange last month for an extended trip in Europe.

Among the applicants elected to membership in the New York Produce Exchange last month were: A. F. Baarslag of the Netherlands Corporation for Oversea Trade, importers and exporters; Julius Isaac of the Continental Grain Company, commission merchants; J. L. Ravenswaay, associated with G. Schilperoord, grain exporter; Henry S. Johnson of Sanday & Co., grain exporters; Max Steen of K. & E. Neumond, exporters.

Henry E. Beardsworth, associated with several grain firms on the New York Produce Exchange in recent years, who went into the freight brokerage business on his own account a short time ago, has closed his office and become affiliated with the commission house of B. F. Schwartz & Co.

Members of the grain trade on the New York Produce Exchange were sorry to hear recently that John H. Hamilton had been laid up in a hospital with a severe attack of pneumonia. Mr. Hamilton is the floor representative of stock and grain brokerage firm of Shearson, Hammill & Co., managing their private wire to the Chicago Board of Trade. The latest report is that he is making satisfactory progress toward recovery.

While the firm of Ramey, Danforth & Yeager, Inc., was organized several months ago, the concern had decided to remain practically idle in a business sense because of the prevailing abnormal conditions growing out of the war. It had been determined not to rebuild the elevator at Jordan, N. Y., which had been destroyed by fire, because of the high cost of mate-



rial, labor, etc. At a meeting of the officers and directors held early in March, however, it was agreed that conditions were more favorable, and it was decided to make preparations for rebuilding the elevator on the old site, which is in a highly favorable location between the New York Central and West Shore Railroads, giving it unusually good sidetrack facilities. Hence the president was authorized to make arrangements for securing bids for the construction of the new building, which will be especially constructed for the handling of grain in sacks and mixed cars of grain, dairy and chicken feeds, etc. The officers are: Charles C. Ramey, president; Joseph W. Danforth (president of the Simpson, Hendee Company), vice-president; M. V. Young, secretary and treasurer. The directors embrace the president, vice-president, secretary and treasurer, and in addition the following: E. B. Waldon, vice-president of the Corn Products Refining Company; George Simpson, treasurer of Simpson, Hendee & Co., and John B. Yeager of J. B. Yeager & Co., Wilkes-Barre.

George B. Ellin, formerly representative on the Produce Exchange floor for Blyth & Bonner, Stock Exchange brokers, has severed that connection and become affiliated with Knight & Co., grain commission merchants of New York and Chicago.

Among the recent visitors on the New York Produce Exchange were James A. Patten, the well-known Chicago grain operator, and Fred S. Lewis of F. S. Lewis & Co., commission merchants on the Chicago Board of Trade.

## INDIANAPOLIS EARL BULLOCK - CORRESPONDENT

ACCORDING to local grain dealers, the movement of grain is gradually increasing each day after having been at a standstill during January and compares favorably with that of February of last year. The movement is said to be due to the fact that the price is a little higher, that farmers are anxious to sell before the assessors come around in March, and also because of the fact that roads are in better condition for hauling. Grain dealers state that at least 70 per cent of the crops is still in the cribs, 55 per cent of the wheat in the hands of the farmers, and the farmers are waiting for better prices.

Ten dollars for every man, woman and child in Indiana is the average annual crop loss in Indiana from insects, according to a statement made by Prof. J. J. Davis, head of the entomology department of Purdue University. This would make a total loss of \$30,000,000 in Indiana, much of which could be prevented by known remedies, if properly applied.

The Indiana Milling Company was made defendant in a damage suit filed by Arthur E. Davis in Superior Court recently to collect \$25,000 as the result of injuries sustained when he fell from a smoke stack which he was employed to paint. He declares that his fall was caused through the negligence of the company. According to the complaint, Davis was employed by the milling company to paint a smoke stack on April 26, 1919. While working employees of the company made a fire in the furnace, causing the ropes to burn, letting Davis fall 30 feet to the ground. He complains that he lost his right eye and six teeth and suffered other permanent injuries.

Although opposed by some members, the Indiana Assembly passed the Steele senate bill giving certain public utilities the right of eminent domain, on approval by the Public Service Commission. The bill defines elevators and warehouses as public utilities. The bill provides that to enable the utility properly to perform its functions it may condemn and appropriate lands of individuals or private corporations for the purpose of erecting buildings, stretching wires, building dams and making other extensions. The bill provides that such condemnation shall not extend to city blocks in which more than half of the area is occupied by residences. No public utility is authorized to begin condemnation proceedings without first obtaining a declaration of necessity from the Public Service Commission, after public hearing.

Announcement has been made of the resignation of William E. Fanning as manager of the Home Grain Company at LaGrange, Ind. His successor is B. F. Greenawalt, a stockholder and officer of the company.

At a luncheon given at the Chamber of Commerce at Columbus, Ind., recently, John S. Shields, general manager of the Blish Milling Company at Seymour, spoke on the grain exchange system. Several Indianapolis grain dealers heard the address. He declared that if a system which would prevent gambling in grain and which would adequately handle the grain crops could be devised that nine-tenths of the grain

dealers of the country would be in favor of doing away with the present system of grain marketing. He said the grain exchange was essential to take care of the marketing of large quantities of grain and that the large number of terminal elevators and country elevators could not be maintained without such a form of exchange. He further explained that grain dealers are insured against losses through grain exchanges by the process of hedging. Dealing in futures was necessary to stabilize the grain market, he said, and showed the conditions existing in Argentina and Russia, where there are no exchanges and because of the lack of dealing in futures the crops fall into the hands of gamblers. Mr. Shields pointed out undesirable features of the system which permits gambling in foodstuffs, but said this could not be eliminated without destroying some of the desirable features of the present system, but when some improved system is presented which proves satisfactory, he said all grain dealers of the country would be behind it.

Barclay S. Mering, 56 years old, chief engineer for the American Hominy Company, died recently at Los Angeles, Calif. Mr. Mering was born in Cincinnati, Ohio, but moved to Terre Haute when a child. He is a graduate of Rose Polytechnic Institute and was employed as a civil engineer at Buffalo, N. Y., soon after his graduation, and was married to Miss Eva Green of that city in 1895. He came to Indianapolis in 1907 as engineer for the Hominy company. Mr. Mering was a member of the Fourth Presbyterian Church. He is survived by a widow and one daughter. The funeral services were held in Los Angeles, Calif.

Frederick Prange, 86 years old, one of the most widely known grain dealers in Indiana, died at his home in Indianapolis recently. He had lived in Indianapolis about 50 years and had always taken an active interest in business affairs.

J. B. Bridewell 63 years old, head of the Bridewell Milling Company of Bloomington, Ind., died at his home there February 28, after a brief illness of pneumonia. Mr. Bridewell is survived by a widow and one son.

Wm. H. Howard, secretary of the Indianapolis Board of Trade, made one of the principal addresses at the Sixth Annual Convention of the Farmers' and Grain Dealers' Association of Indiana, which was convened in Wabash. Mr. Howard talked on "Indianapolis as a Grain Market."

Articles have been filed here showing the organization of the Fowler Grain Company at Fowler, Ind., with a capital stock of \$103,000. Perry Stembel is head of the company.

The Evans Milling Company recently received one of the biggest feed dryers in the state. The piece of machinery, which is all in one piece, weighs 75,000 pounds. It required about four weeks to remove the dryer from the car on which it was shipped to the third floor of the new building the milling company is constructing.

Articles have been filed here showing the organization of the Oak Town Grain Company at Oak Town, Ind., with a capital stock of \$50,000. Roy Clodfelter and Russell Bond are interested in the new venture.

## LOUISVILLE A. W. WILLIAMS - CORRESPONDENT

THERE has been a little improvement in demand for feed, hay and grain with the local jobbing trade, and retailers are busier than they ever were, but as a whole business is below normal, and prospects are not especially good. The country has plenty of grain and hay this year, and hasn't been buying much, while city business has been so greatly reduced through the smaller number of livestock carried for dairy, draying and other use, that it is small as a whole compared with that of a few years ago. Loss of distilling business is also a factor that has greatly reduced the volume of business handled through the grain houses and local elevators. The suspension of several corn mills in this section, and reduced demand for manufactured feeds have also been felt.

It is claimed by some of the elevator men that business has been very dull for the past four months. Conditions in the unsettled wheat market have resulted in millers carrying such small stocks of wheat that their own capacities have been far greater than their needs, with the result that only the larger market elevators have had the pleasure or profit of carrying any supplies of wheat. With distilling also at a standstill there has been little or no need of carrying any large stocks of rye, corn, etc., to supply such

trade, while with the country well supplied with cheap corn there hasn't been the feeding demand passing through the larger city elevators.

F. C. Dickson, of the Kentucky Public Elevator Company, said: "We've had a mighty rotten period, not handling one-fifth of our capacity in grain of late. We've handled a little corn and oats, and much less wheat. Stuff is coming in and going right out again, with the result that there is very little storage of any moment. Seed oats volume has not been especially large so far."

Mr. Dickson in discussing conditions remarked that a considerable part of the dullness in the local elevator trade, which is general here, is due to the intrastate freight rates of Indiana being so low as to work a great hardship on the grain trade of towns on the south side of the Ohio. Grain houses or elevators at New Albany or other north side points can bring in grain from any part of Indiana on intrastate rates, reship at a lower cost from the north side, and at the same freight rates as Louisville from the Ohio Southward, or can ship back to intermediate Indiana points on intrastate rates, as against intrastate for Louisville. The difference this is making shows in a statement made by O. W. Edinger, of Edinger & Co., Louisville, who said: "We can't do anything much in Indiana now, as New Albany is underselling us by four cents a bushel on oats, due to the inequality of the freight rates."

One Western Kentucky elevator man has recently purchased an old elevator on the north bank of the Ohio, which enables him to handle interstate grain to this elevator, unloading it there, and reloading on fresh shipments to points south of the Ohio River. Otherwise he would be in steady competition with southern Indiana elevators, where he couldn't meet the price. Of course a change of some kind will probably be made sooner or later, with the prospects for it being considerably later as a result of the slowness with which the Interstate Commerce Commission acts.

Present hay quotations in Kentucky are much lower than they were a month ago. No. 1 haled Timothy is offered at about \$24; No. 2, at \$22; Mixed, No. 1, \$22, No. 2, \$19; Clover, No. 1, \$24, No. 2, \$21; wheat and oat straw, \$14; rye straw, \$16. During the past few days offerings have been much better, with receipts better, while demand has been slightly keener. Farmers are now trying to clean up their old hay before crop planting starts.

Reports from seedmen are to the effect that prospects are for a big Clover crop this season, Clover seed being cheap, which is resulting in farmers buying it very freely. A good deal of it is being planted of course for land fertilization, with the idea of plowing it under, but a lot will be used for crop purposes.

Corn is showing steadier prices, with Yellow, Mixed and White at the same quotation, there being no premium for a change. No. 2 is quoted at 76 cents and No. 3, 2 cents a bushel under No. 2. Oats are in fair demand, with No. 2 White, 52 cents, No. 3 White, 51½ cents, No. 2 Mixed, 50 cents. Seed oats are quoted at two cents a bushel over regular grades. There is some demand also developing for seed corn, which is being sold by the seed trade at around \$2 a bushel, for good stock from previous crops. There is much damaged corn in cribs this year, which was injured by mushy weather, and which isn't fit for planting.

The Kentucky Court of Appeals has recently upheld the Jefferson Circuit Court, in declaring against the City Tax Assessor, Louisville, who tried to assess grain and feed, seeds, etc., as merchandise, instead of agricultural products, the former carrying a \$2 per hundred tax rate, whereas agricultural products carry a 15-cent rate per hundred.

Wheat crop reports from all over Kentucky are promising, it being reported from every section that the winter has been easy with the crop, which is looking fine, and probably about out of danger. At a meeting of the Central Kentucky Millers Association, Lexington, Ky., a few days ago, it was held that the state crop shows a 90 per cent acreage, based on pre-war average; and a 100 per cent condition.

Suit has been filed by the Southern Railway Company, Louisville, against the Louisville Cottonseed Products Company, for demurrage amounting to \$7,336, representing charges for holding cars on siding over 24 hours, between October 1, 1919 and November 30, of that year. The company refused to pay the charges, therefore the suit. However, considering the fact that during that period the company was tied up as a result of a bad fire in the plant, there is an excuse for not being able to receive the stuff.

While most of the corn mills in this section are down, the Louisville Cereal Mills Company, reports a very fair demand, and that it has been operating full. This concern has an established trade that has stuck however, as it has been in the game since 1906 when it took over the Rahheth-Rutherford Milling Company's business. Richard B. Crawford, city sales manager



for the company, recently called attention to the fact that their local business had increased to a point where additional motor truck equipment had been installed.

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Hezekiah Griffith, 88 years of age, president of the First National Bank, Columbus, Ind., and a grain dealer since 1855, recently died at his home in that city, where he started as a clerk in his brother's dry good store when 14 years of age. He was reputed as one of the wealthiest men in the county.

## TRANSPORTATION NOTES

### JOINT RATES ON GRAIN

In I. and S. No. 1233, opinion No. 6565, 59 I. C. C. 733, the Commission held that the Big Four was not warranted in proposing to cancel the joint rates on grain from stations on the Toledo, St. Louis & Western east of Cayuga, Ind., protested by the Indianapolis Board of Trade. The dispute about divisions did not result satisfactorily. The matter may be brought to its attention.

### REPARATION FOR DEMURRAGE

An award of reparation has been made in No. 10428, E. E. Delp Grain Company vs. Philadelphia & Reading et al., opinion No. 6569, 59 I. C. C. 755-7, on account of illegally assessed demurrage charges on 14 carloads of salvaged oats held at Port Richmond, Pa., after they had been shipped there from New York.

The oats in question were taken from a leaking vessel in New York and shipped to the elevator of the Philadelphia Grain Elevator Company, controlled by the Philadelphia & Reading, for drying. That was a commercial transaction for which the complainant made arrangements in February, 1918. In April the elevator company began suggesting to the complainant that it send no more oats to be dried because the elevator company could not say how soon they could be handled. There were then 16 cars of oats awaiting drying.

Complainants, to help out the elevator company, suggested that the railroad make a special rate on the oats to Baltimore so that it could ship the delayed cars to that point for drying. Nothing came of that proposal. Fourteen cars remained on the Reading's tracks until May 6, when the railroad threatened to sell the oats for demurrage. Thereupon, the complainant paid the demurrage and war tax, the former amounting to \$2820.

The Commission, in disposing of the case, said the tariff rules were defective in that they did not distinguish between the commercial and transportation services the elevator offered to perform. It held that the demurrage charges were not provided for in the tariff and, therefore, not legally assessed, and directed the return to the complainants of the \$2,820 demurrage.

The tariff rule provides that demurrage will not be assessed on bulk grain sent to the elevator "except when ordered by shipper or consignee to be held in cars or reconsigned for domestic delivery."

The Commission pointed out that the grain was not held in cars for the consignee or reconsigned for domestic delivery. It pointed out that the change in destination was made only because of the threat to sell oats held for drying simply because the elevator company could not handle them as fast as the complainant sent them to Port Richmond.

## AN EARLY SPRING

The condition of the Great Lakes in respect to ice gives promise of an early spring movement for grain from the head of the lakes. A recent bulletin from the Central Shipping Company says:

Latest report from survey of the United States Department of Agriculture notes existing ice fields as much less in all lakes as against this time last year. The ice in Duluth-Superior harbor is 17 inches in thickness and there is a field of broken ice drifted in by easterly winds extending four miles out from Minnesota point. The field will probably move out with westerly winds. There are no ice fields visible in the lake outside of the Apostle Islands and none off Keweenaw Point or east of Whitefish Point, where the broken ice fields are drifting in and out. In lower Whitefish Bay there is no solid ice; at Sault Ste. Marie the ice is 14 inches in thickness; at Mud Lake, below Moon Island, 18 inches. In Lake Michigan there are no ice fields reported along the west or east shores until as far north as Charlevoix, where ice fields extend beyond vision, although ice not heavy. At Mackinaw, the straits are filled with broken ice drifting in and out over east portion, but is stationary west of McGulpins Point. Harbor ice at Mackinaw is 10 inches in thickness.

The St. Claire River is reported open as far as Marine City. The ice field in Lake St. Clair is well broken up and large amounts of open water showing. Detroit River is open and broken ice running down the river steadily. Very little ice in Lake Erie and none reported over the Western portion. At Erie there is a field packed in near shore and fish tugs have some difficulty in moving through it. At Buffalo practically no ice in harbor and little floating ice visible in lake. From Port Niagara to Sacketts Harbor a small amount of ice in some harbors but none visible in the lake. Atodus Point harbor ice is nine inches in thickness and solid; firm ice reported at Kingston, Ontario. It is beginning to break up at Ogdensburg and pass down the main channel. An early lake season is predicted.

# ASSOCIATIONS

## CONVENTION CALENDAR

March 16, 17—Farmers Grain Dealers Association of Missouri, Sedalia.

April—Western Grain Dealers Association, Cedar Rapids.

May 10, 11—Illinois Grain Dealers Association, Peoria.

May 18, 19—Oklahoma Grain Dealers Association, Oklahoma City.

May 24-26—Kansas Grain Dealers Association, Kansas City, Mo.

June 19, 20—Wholesale Grass Seed Dealers Association, St. Louis, Mo.

June 21-23—American Seed Trade Association, St. Louis, Mo.

September 6, 7—National Hay Association, Chicago.

## WESTERN DEALERS TO MEET

The Board of Directors of the Western Grain Dealers Association have decided to hold the next annual convention at Cedar Rapids during the month of April. The definite date will be fixed later.

## TO SERVE HAY ASSOCIATION

Harry G. Morgan of Pittsburgh has been appointed to membership in the Board of Directors of the National Hay Association to fill a vacancy created by the recent death of Samuel Walton. Mr. Morgan was vice-president of the National Hay Association in 1903 and president in 1904 and has served as a director at various times before and since. He is a man of sterling character and one whose judgment is sought for on all matters pertaining to the hay trade. His selection by the Board was a most happy one.

## MISSOURI FARMER DEALERS TO MEET

The Farmers Grain Dealers Association of Missouri will hold its annual meeting at Sedalia March 16 and 17. Subjects to be discussed will be Elevator Bookkeeping and Records; Collecting Grain Claims; A Report of the Grain Marketing Committee of 17; How to Make the Moisture Test; Grain Grading Demonstration; Co-operative Purchasing of Farm Supplies; A State Farmers' Elevator Co-operative Buying Agency; Missouri Co-operative Law. An invitation is extended to all members of boards of directors, elevator managers and others interested in grain marketing to attend the state meeting at Sedalia.

## OHIO FARMER DEALERS MEET

The Ohio Farmers Grain Dealers Association met in Cleveland on February 22. Among the speakers were Mark Pickell of Chicago who talked on "The Grain Dealers' Program"; E. G. McCollum of Indiana on "Forward Steps in Marketing"; Clifford Thorne of Chicago on "Traffic Problems"; Judge Palmer of Defiance, on "The Cooperative Union Elevator"; Professor Erdman of Columbus, on "The Cooperative Movement."

President R. E. Croninger was reelected. Other officers chosen were: D. J. Lloyd of Waterville, vice-president; C. F. Smith, second vice-president; Charles Latchaw, treasurer. Directors: L. I. Winch, D. L. Dunham and R. D. Cole.

## N. D. FARMERS DEALERS MEET

The tenth annual convention of the North Dakota Farmers Grain Dealers Association, meeting at Jamestown, March 1 to 3, adopted a resolution opposing any state or Federal legislation "that will seriously interfere with or change the grain marketing machinery" at the present, and warned Minnesota legislators against passing pending legislation of this nature.

This resolution followed an interesting three day session at which many important subjects were fully discussed.

Officers for the new year were elected as follows: President. A. A. Lane, Sherwood; vice-president, George Knauss, Hannaford; secretary, P. A. Lee, Grand Forks; treasurer, L. A. Wimken, Grand Forks. Directors: A. Robbi, Cavalier; Ole Serumgaard, Devils Lake.

## APPOINTMENTS BY NATIONAL ASSOCIATION

The Board of Directors of the Grain Dealers National Association has selected E. M. Wayne, of Delavan, Ill., as a member of the Board to succeed the late Lee G. Metcalf, who died on January 3 last. Mr. Wayne will fill the unexpired term of Mr. Metcalf, who was elected a Director of the National Association for the full term of two years at the Minneapolis convention last October. Mr.

Wayne has served as president of the Association and his wide experience and sound judgment will be a real asset to the organization at this time.

Mr. Metcalf was also a member of the Legislative Committee of the Association and President Clement has filled this vacancy by appointing J. A. Daugherty, of Nashville, Tenn., to serve on the Committee until the next annual meeting.

## NATIONAL ASSOCIATION PUBLISHES ARBITRATION DECISIONS

The long awaited "Decisions of the Arbitration and Appeals Committees of the Grain Dealers National Association" has been published, and is fully up to expectation. This is the first volume of a series, for it is the intention to issue additional books from time to time.

The volume covers decisions from the first, made in 1902, up to 1920. The decisions are given in full in the order in which they were issued, and in addition there is a brief syllabus of each case arranged alphabetically, and a complete topical index, which will permit every dealer to refer at once to the decision covering the point at issue in his own case if he becomes entangled in a dispute.

The book is an invaluable aid for every grain dealer and no one doing business under the National Trade Rules should be without a copy. Only about 400 copies remain out of the edition of 1,000 and as the price is but \$5 they will be quickly snapped up. If you want your copy we advise a quick order on Secretary Charles Quinn of Toledo. Mr. Quinn is to be congratulated on this useful adjunct to facile trading.

## MINNESOTA DEALERS MEET

Although the discussion on future trading brought out some sharp invective and extravagant misstatements, the convention of the Farmers Grain Dealers Association of Minnesota kept its head and refused to make any recommendation for a change at this time.

The meeting was held at Minneapolis, February 15 to 17. President H. R. Meisch was unable to be present so the meetings were presided over by Vice-president A. O. Lunder, and Charles Kenning, the latter bearing the chief burden.

Among the speakers were M. R. Myers of Chicago, who spoke on "Collective Buying"; Owen L. Coon of Chicago, on "Freight Adjustments and Railroad Claims"; C. J. Rockwood of Minneapolis, on "The St. Lawrence Waterway Route"; Charles H. Eyler of South Dakota on "Marketing"; and Col. Wil-Wilkinson of St. Elmo and T. E. Cashman of Watonna who spoke in favor of the anti-future trading bill, and Asher Howard of Minneapolis who spoke against it.

The resolutions adopted included the following:

Whereas, it has been impossible for our president, H. R. Meisch to be present during our convention on account of necessary absence from the state on account of his health, therefore be it

Resolved, That we express our sympathy to him in his affliction and our regrets at his inability to be present during our convention and wish for him his speedy convalescence.

Whereas, it is as necessary that the farmers or producers be advised of the production and consumption of farm crops in the world as it is for others, therefore be it

Resolved, That we urge Congress to promptly take necessary action for the establishment of a world crop reporting service covering both consumption and production under the auspices of the U. S. Department of Agriculture and we ask that this department be given needed funds for the collection of such information and its prompt delivery to farmers and we especially approve to this end the plan recently submitted of the National organization.

Whereas, there has been a general decline in the prices of nearly all commodities transported by the railroads and especially on the products of the farm and that the present rates of freight are unduly high in comparison with farm products, therefore be it

Resolved, That we urge an early readjustment of the freight rates downward, and be it further

Resolved, that we condemn in the most unqualified terms the provisions embraced in the legislation providing for guaranteeing a net rate of returns to the railroads above all operating expenses as economically and socially and politically unsound.

Whereas, there has been such a serious lack of care for shipping grain and potatoes at times and resulting in the loss of immense sums of money to the producer, therefore be it resolved, that we ask our Railroad and Warehouse Commission to take such steps as to urge the railroads to furnish adequate shipping facilities for said commodities.

Whereas, we believe that the development of the St. Lawrence River to permit ocean commerce to reach the lake ports without expensive transfers is necessary to save freight charges and avoid disastrous delay, therefore be it

Resolved, that we endorse the project which may be found most feasible by our Government engineers.

Whereas, it is necessary to the stabilizing of the business of the various farmers' companies of our state and that the manager be protected against unjust criticism and the company be guarded against unwise management, thereby making more secure the stability of the company in either instance, therefore be it

Resolved, That we urge the companies to engage an



expert auditor at least annually to audit the accounts of the company.

Whereas, we have been able to secure a lower rate of bonding insurance by pooling our bonding, be it

Resolved, That we authorize and instruct our Board of Directors to endeavor to get a somewhat similar proposition for insurance on grain and grain elevators that we have on bonding with the agencies commission to the state association. We give our Board of Directors to act in this matter if in their judgment the arrangements they can secure justify such action.

Whereas, we believe the free importation of Canadian wheat has operated against the prices of the wheat to the American farmer, therefore be it

Resolved, That we urge our representative in Congress to take early action to revise the tariff laws such as to adequately protect the products of the farmers if the tariff is continued on the necessities which the farmers purchase.

Whereas, the business of agriculture has been constantly subject to violent and ruinous price fluctuations on farm products, be it

Resolved, That we heartily endorse the efforts of the Committee of Seventeen in their study of terminal and export marketing problems and that we stand ready to co-operate in any practical plan that will eliminate this uncertainty and that we refrain from taking any part or offering any recommendations changing the present methods of marketing grain until after this committee has concluded its deliberations.

Whereas, it is difficult to secure adequate protection in the purchase and sale of small quantities of grain under the present minimum of 1,000 bushels possible to be used in hedging, be it

Resolved, That we ask the Chamber of Commerce of Minneapolis and the Board of Trade of Duluth to establish a minimum of 500 bushels with which to make use in hedging transactions.

The election of officers resulted in the choice (after the refusal of A. O. Lander to accept the office of president owing to poor health) of Charles Kenning, of Bird Island, as president; H. J. Farmer, Airlie, vice-president; and Adam Brinn, treasurer; H. J. Farmer, Airlie, A. C. Nelson, Ben and Theodore Frederickson, Airlie, directors.

## RECEIPTS AND SHIPMENTS

Following are the receipts and shipments of grain, etc., at the leading terminal markets in the United States for February:

**BALTIMORE**—Reported by Jas. B. Hessong, secretary of the Chamber of Commerce.

Receipts		Shipments	
1921	1920	1921	1920
Wheat, bus..	739,799	516,236	1,165,944
Corn, bus....	3,143,280	439,836	2,190,145
Oats, bus....	129,004	445,310	56,362
Barley, bus..	211,270	1,188	210,833
Rye, bus....	1,702,930	2,434,332	1,520,000
Hay, tons....	1,495	1,658	.....
Flour, bbls..	97,684	119,970	31,455

**CHICAGO**—Reported by John R. Mauff, secretary of the Board of Trade.

Receipts		Shipments	
1921	1920	1921	1920
Wheat, bus..	1,134,000	2,231,000	1,192,000
Corn, bus....	13,657,000	7,759,000	5,166,000
Oats, bus....	3,874,000	6,811,000	3,304,000
Barley, bus..	483,000	968,000	465,000
Rye, bus....	367,000	710,000	234,000
Timothy Seed, lbs. ....	2,076,000	3,381,000	2,978,000
Clover Seed, lbs. ....	2,165,000	2,557,000	1,974,000
Other Grass Seed, lbs....	1,516,000	3,262,000	2,187,000
Flax Seed, bus. ....	17,000	100,000	3,000
Broom Corn, lbs. ....	1,271,000	1,011,000	1,615,000
Hay tons....	10,723	26,810	1,645
Flour, bbls..	796,000	1,007,000	587,000

**CINCINNATI**—Reported by D. J. Schuh, executive secretary of the Cincinnati Grain & Hay Exchange.

Receipts		Shipments	
1921	1920	1921	1920
Wheat, bus..	109,200	255,000	117,600
Shell'd Corn, bus. ....	337,200	289,200	214,800
Oats, bus....	278,000	426,000	330,000
Barley, bus..	5,200	5,200	.....
Rye, bus....	15,600	2,400	20,400
Ear Corn, bus. ....	.....	99,200	.....
Feed, tons....	1,560	2,700	.....
Hay, tons....	9,283	9,548	.....

\*These figures do not include shipments made from track.

**DULUTH**—Reported by Chas. F. Macdonald, secretary of the Board of Trade.

Receipts		Shipments	
1921	1920	1921	1920
Wheat, bus..	1,405,976	230,515	1,215,468
Corn, bus....	267,431	.....	10,772
Oats, bus....	975,927	21,843	4,087
Barley, bus..	1,916	39,287	38,073
Rye, bus....	304,502	1,201,206	201,547
Flax Seed, bus. ....	107,251	101,761	22,955
Flour, bbls..	.....	60,690	57,315

**FORT WILLIAM, ONT.**—Reported by E. A. Ursell, statistician of the Board of Grain Commissioners.

Receipts		Shipments	
1921	1920	1921	1920
Wheat, bus..	4,519,862	2,929,467	3,039,917
Corn, bus....	4,473	3,456	5,539
Oats, bus....	3,151,052	774,589	451,944
Barley, bus..	662,091	327,168	151,177
Rye, bus....	94,055	53,894	132,773
Flax Seed, bus. ....	335,594	48,058	27,645
Mixed Grain, lbs. ....	1,876,655	1,016,538	213,880
Buckwheat, lbs. ....	59,100	.....	59,100

**GALVESTON**—Reported by H. A. Wickstrom, chief inspector of the Cotton Exchange and Board of Trade.

Receipts		Shipments	
1921	1920	1921	1920
Wheat, bus..	.....	5,197,724	616,085
Corn, bus....	.....	25,714	.....
Barley, bus..	.....	.....	132,583
Rye, bus....	.....	366,185	.....

**INDIANAPOLIS**—Reported by Wm. H. Howard, secretary of the Board of Trade.

Receipts		Shipments	
1921	1920	1921	1920
Wheat, bus..	182,000	188,500	52,000
Corn, bus....	1,384,000	2,223,000	1,169,000
Oats, bus....	684,000	1,558,000	796,000
Rye, bus....	12,600	8,400	1,400

**KANSAS CITY**—Reported by E. D. Bigelow, secretary of the Board of Trade.

Receipts		Shipments	
1921	1920	1921	1920
Wheat, bus..	6,556,950	4,213,350	5,354,100
Corn, bus....	1,630,000	1,723,750	416,250
Oats, bus....	128,400	1,033,600	504,000
Barley, bus..	117,000	157,500	75,400
Rye, bus....	30,800	67,100	28,600
Hay, tons....	45,384	73,008	24,564
Flour, bbls..	48,100	68,900	250,250

**MILWAUKEE**—Reported by H. A. Plumb, secretary of the Chamber of Commerce.

Receipts		Shipments	
1921	1920	1921	1920
Wheat, bus..	248,400	290,780	142,075
Corn, bus....	1,471,920	1,508,150	1,541,725
Oats, bus....	539,440	1,590,190	470,300
Barley, bus..	497,490	524,380	143,630
Rye, bus....	150,120	263,220	145,410
Timothy Seed, lbs. ....	210,000	343,211	299,081
Clover Seed, lbs. ....	70,480	628,436	740,069
Flax Seed, bus. ....	69,340	1,720	.....
Feed, tons....	1,260	12,556	15,334
Hay, tons....	996	288	168
Flour, bbls..	125,870	41,930	128,310

**MINNEAPOLIS**—Reported by G. W. Maschke, statistician of the Chamber of Commerce.

Receipts		Shipments	
1921	1920	1921	1920
Wheat, bus..	7,371,960	6,628,770	3,270,400
Corn, bus....	1,099,810	927,810	951,180
Oats, bus....	1,252,090	1,237,750	1,110,920
Barley, bus..	739,410	592,110	787,270
Rye, bus....	359,010	694,960	289,330
Flax Seed, bus. ....	262,050	362,340	37,050
Hay, tons....	2,029	2,499	175
Flour, bbls..	94,679	125,191	1,218,502

**NEW ORLEANS**—Reported by G. S. Colby, chief grain inspector and weighmaster of the Board of Trade, Ltd.

Receipts		Shipments	
1921	1920	1921	1920
Wheat, bus..	.....	4,974,017	1,330,719
Corn, bus....	.....	1,735,750	41,920
Oats, bus....	.....	24,775	56,690
Barley, bus..	.....	468,723	365,583
Rye, bus....	.....	87,857	.....

**NEW YORK CITY**—Reported by H. Heinzer, statistician of the Produce Exchange.

Receipts		Shipments	
1921	1920	1921	1920
Wheat, bus..	1,982,700	.....	2,975,000
Corn, bus....	1,252,700	.....	1,085,000
Oats, bus....	542,000	.....	70,000
Barley, bus..	467,600	.....	277,000
Rye, bus....	245,600	.....	606,000
Timothy Seed, bags. ....	.....	.....	2,271
Clover Seed, bags. ....	.....	.....	1,881
Flour, bbls..	694,016	.....	425,000

**OMAHA**—Reported by F. P. Manchester, secretary of the Grain Exchange.

Receipts		Shipments	
1921	1920	1921	1920
Wheat, bus..	999,600	720,000	981,600
Corn, bus....	2,329,600	2,588,600	1,481,200
Oats, bus....	420,000	1,374,000	610,000
Barley, bus..	61,200	30,600	70,200
Rye, bus....	49,500	126,500	50,600
Timothy Seed, lbs. ....	.....	.....	2,271
Clover Seed, lbs. ....	.....	.....	1,881
Flour, bbls..	694,016	.....	425,000

**PEORIA**—Reported by John R. Lofgren, secretary of the Board of Trade.

Receipts		Shipments	
1921	1920	1921	1920
Wheat, bus..	75,800	126,450	78,000
Corn, bus....	1,484,450	3,566,250	1,169,050
Oats, bus....	599,000	1,235,200	587,900
Barley, bus..	91,000	63,000	64,400
Rye, bus....	21,600	68,400	21,600
Mill Feed, tons. ....	7,320	13,900	9,230
Seeds, lbs....	150,000	240,000	150,000
Broom Corn, lbs. ....	45,000	30,000	.....
Hay, tons....	810	2,910	400
Flour, bbls..	236,805	309,400	219,200

**PHILADELPHIA**—Reported by S. S. Daniels, statistician of the Commercial Exchange.

Receipts		Shipments	
1921	1920	1921	1920
Wheat, bus..	838,603	556,274	956,486
Corn, bus....	1,601,225	342,841	903,439
Oats, bus....	122,028	275,950	.....
Barley, bus..	.....	1,495	8,333
Rye, bus....	107,836	366,136	51,476
Flour, bbls..	194,598	175,235	50,038

**PORTLAND, ME.**—Reported by Geo. F. Feeney, traffic manager of the Chamber of Commerce.

Receipts		Shipments	
1921	1920	1921	1920
Wheat, bus..	2,429,823	1,306,224	2,538,825
Corn, bus....	101,534	217,345	.....
Oats, bus....	182,786	49,940	223,835
Barley, bus..	170,183	170,876	.....
Rye, bus....	66,956	227,539	218,251

**ST. LOUIS, MO.**—Reported by Eugene Smith, secretary of the Merchants Exchange.

Receipts		Shipments	
1921	1920	1921	1920
Wheat, bus..	2,890,122	1,434,110	2,138,610
Corn, bus....	2,695,688	3,819,300	1,653,630
Oats, bus....	1,932,600	3,174,000	1,812,680
Barley, bus..	76,800	80,000	32,940
Rye, bus....	29,700	14,300	18,160
Hay, tons....	16,879	32,583	7,430
Flour, bbls..	329,960	471,700	387,450

**SAN FRANCISCO**—Reported by Henry C. Bunker, chief inspector of the Chamber of Commerce.

Receipts		Shipments	
1921	1920	1921	1920
Wheat, tons..	6,022	2,855	.....
Corn, tons....	1,031	1,366	.....
Oats, tons....	286	2,113	.....
Barley, tons..	11,305	3,634	.....
Bran, tons....	89	301	.....
Hay, tons....	4,131	5,892	.....
Beans, sacks	48,402	61,969	.....

**TOLEDO**—Reported by A. Gassaway, secretary of the Produce Exchange.

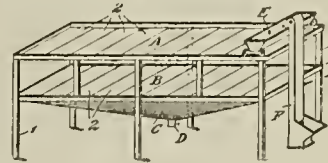
Receipts		Shipments	
1921	1920	1921	1920
Wheat, bus..	172,200	313,600	118,769
Corn, bus....	156,250	87,450	127,902
Oats, bus....	199,900	176,300	226,900
Barley, bus..	2,400	2,400	.....
Rye, bus....	36,000	25,200	33,177
Timothy, bags	2,045	6,851	3,312
Clover, bags..	8,457	2,504	11,332
Alsike, bags..	1,180	1,245	1,199

## GRAIN TRADE PATENTS

Bearing Date of January 4, 1921

Grain drying apparatus.—Victor Bigand, Buenos Aires, Argentina. Filed November 3, 1919. No. 1,364,477. See cut.

Claim: A grain drying apparatus including a skeleton frame provided with a plurality of superposed floors each of which consists of a series of perforated sections having their ends pivotally mounted in said frame, means for holding the sections of one floor in substantial alignment or for tilting said sections to cause material carried thereby to be dropped through the floor, a hopper arranged beneath the floors, receiving



ing materials therefrom and provided at its bottom with a discharge chute having a closing means, an elevator provided at one end of said frame and designed to elevate grain to the upper one of said floors, and a hopper receiving grain from said elevator and provided with rollers engaging the top of said frame for moving said hopper over the upper floor sections to deposit grain upon said sections.

Bearing Date of January 11, 1921

Cable for thermo-electric circuits of grain tanks.—Leonard H. Des Isles, Chicago, Ill. Filed July 24, 1918. No. 1,365,465.

Grain cleaner.—Andrew V. Cleland, Minneapolis, Minn. Filed January 8, 1918. No





## CANADA

The Welwyn Farmers Elevator Company, Ltd., of Welwyn, Sask., has been authorized to increase its capital stock from \$7,000 to \$25,000.

James W. Ford, grain and hay merchant, operating at Penticton, B. C., has sold his business there to the Penticton Food Products, Ltd.

## OHIO AND MICHIGAN

Dustman Bros. of Ohio City have bought the elevator at Latty, Ohio, formerly owned by a Payne, Ohio, concern.

The elevator at Rochester, Mich., has been purchased from Frank C. Shoup by the Farmers Elevator Company.

Frank Clella and Geo. Nachtrieb have sold their grain elevator at Ogden, Mich., to the Blissfield Co-operative Association.

The capital stock of the Wagner White Company of Jackson, Mich., has been increased from \$60,000 to \$120,000. The firm handles grains and seeds.

The Farmers Co-operative Grain Company of Kinde, Mich., has been reincorporated and expects to reopen the grain elevator there in the near future.

The grain, produce, fuel and stock of W. M. Monroe & Son at Bronson, Mich., have been sold to the Bronson Co-operative Association which was recently organized. Immediate possession was given.

Articles of incorporation have been filed by G. A. Hahn, G. W. Morris, W. H. Walker, F. S. Cossier and A. G. Mills as the Oberlin Elevator Company of Oberlin, Ohio. The firm is capitalized at \$50,000.

The mill and other property of the Byron Center Grain & Fuel Company at Byron Center, Mich., have been purchased by the Farm Bureau. The company will continue to conduct a fuel, fertilizer, custom grinding business, etc.

The real estate and grain business of the Richwood Grain Company of Richwood, Ohio, has been purchased by the Richwood Farmers Exchange Company. The change in ownership took place March 1. O. W. Frum is president; J. P. Sidle, vice-president; Frank McDaniel, treasurer; and E. B. Baumgarner, secretary.

## INDIANA

Notice of dissolution has been filed by the Union Elevator Company of Evansville, Ind.

An addition has been built to the elevator of Wolfe & Bevington at Shipshewana, Ind.

The Silver Lake Farmers Elevator Company has purchased the Kinsey Bros.' elevator at Silver Lake, Ind.

The Cates, Ind., elevator has been purchased by H. Conover. He has employed Sam Mettee to manage it.

The Wheatland Elevator Company succeeds the old Farmers Union Elevator Company at Wheatland, Ind.

B. F. Greenawalt succeeds Wm. E. Fanning as manager of the Home Grain Company which operates at La Grange, Ind.

A new 35-horsepower motor has been installed in the elevator of the Coatesville Elevator & Feed Company of Coatesville, Ind.

The elevator of the Mardenis Equity Exchange at Markle, Ind., has been remodeled and the power changed from steam to electricity.

The name of the Hays Milling & Grain Company of Worthington, Ind., has been changed to that of the Farmers Associated Elevators Company.

F. R. Daugherty has purchased the elevator of the King Grain Company located at Wabash, Ind., and will operate as the King Grain Company.

Julius O. Artes was recently re-elected president of the Evansville (Ind.) City Council. He was formerly president of the Union Elevator there.

The elevator of the Horton Elevator Company of Hortonville, Ind., has been purchased by the Farmers Co-operative Company. R. Wood is manager.

The Rolling Prairie Grain Company of Rolling Prairie, Ind., has made plans for conducting a small lumber yard in connection with its grain and coal business.

The W. L. Brown coal and lumber yards at Lawrence, Ind., have been purchased by the Farmers Terminal Grain & Feed Company of Indianapolis, Ind. It will erect a new elevator and warehouse

there in the near future. Geo. W. Shook is president and Henry Lantz, vice-president. The new owners will take charge April 1.

The Macy Elevator and Feed Mill at Converse, Ind., have been purchased by Guy L. Kepner. The plants were formerly the property of John Crowder.

The McMahan-Wood Company of Valparaiso, Ind., has purchased the old Lindner Elevator there from J. W. Brummitt. The new owners will remodel it into a modern structure.

The Wm. Gale Elevator at Cumberland, Ind., has been purchased by the Farmers Terminal Grain & Feed Company of Indianapolis. The purchaser will operate the elevator as a branch house.

Clarence Knepper is the successor of A. J. Quick as manager of the Farmers Elevator Company at South Whitley, Ind. Mr. Quick is manager now of the Richvalley Co-operative Elevator Company of Richvalley.

A company to be known as Newman & Smith was recently organized at Cynthiana, Ind., by S. C. Newman and J. O. Smith, and has taken over the grain and coal business there which Mr. Newman operated formerly.

John Seller, I. H. Hull, T. H. Richardson, L. W. Guse, and W. C. Hunsley are the directors of the recently incorporated Hanna Co-operative Equity Union Exchange of Hanna, Ind. The capital stock of the firm is \$40,000. The company will deal in grain, stock, etc.

## THE DAKOTAS

The grain, hay and feed business of Geo. Nelson at Ardmore, S. D., has been purchased by J. Wasserburger.

The Geo. Bagley Elevator Company's elevator at Red Elm, S. D., is under the management of L. E. Rosenthal.

Ord Whiting has been succeeded as buyer for the Farmers Elevator Company of Benedict, N. D., by J. Harchanko.

D. Haffy is no longer manager of the Equity Elevator Company of Tower City, N. D. He resigned his position as such some time ago.

The Davenport Elevator at Toronto, S. D., has been leased by Ed. Lovre. Mr. Lovre has been manager of the elevator for many years.

The Stokka Bros. Company has been incorporated at Cooperstown, N. D., to handle grain and farm lands. The capital stock of the company is \$50,000.

A new truck dump and a 10-ton scale has been installed in the elevator of the Olmstead Grain Company of Olmstead, N. D. C. E. Briggs is manager.

Plans are being formulated by farmers in the vicinity of Freeman, S. D., for the organization of a cooperative elevator company there to build and operate a grain elevator.

A grain storage plant is to be built for the Fargo Mill Company of Fargo, N. D. The company will also provide for a feed and flour warehouse and for increased milling capacity.

The elevator at Hastings, N. D., formerly owned by L. Larson has been purchased by the Hastings Grain Company. The Hastings concern is composed of G. A. Lenhart and B. C. Hanson.

## EASTERN

Capitalized at \$3,000, the Somerville Hay & Grain Company, Inc., was incorporated at Cambridge, Mass.

The Glens Falls Brick & Lumber Company of Glens Falls, N. Y., has opened a grain elevator of 20,000 bushels capacity.

The New Era Cash Grain & Feed Company of Buffalo, N. Y., has changed its name to that of the New Era Feed Company.

Rufus L. Brown is president of the Berkshire Coal & Grain Company, Inc., which was recently incorporated at North Adams, Mass., capitalized at \$200,000.

Wm. Gower has purchased the store, cider mill, etc., of Jacob Middlekauff at Spielman (r. f. d. Fairplay), Md., and will erect a modern grain elevator there in the near future.

The Cutler Company of North Wilbraham, Mass., will operate under its own name the hay and grain establishment at Chatham, N. Y., heretofore conducted under the name of the Chatbam Grain Company. The change in name does not involve change

in ownership. The company operates in various localities in New York and Massachusetts and this change places them all under one name.

Arthur E. and John B. Clark have purchased the grain and feed business of Geo. B. Washburn at Richland, N. Y. Mr. Washburn established the business there nearly 40 years ago.

Ramey, Danforth & Yeager, Inc., of New York, N. Y., have decided to rebuild the elevator at Jordan, N. Y., which was recently destroyed by fire. Chas. C. Ramey is president of the firm.

The Girard Point Elevator Company and the Philadelphia Grain Elevator Company of Philadelphia, Pa., have published the announcement that they will not receive orders for drying of corn to 12 per cent moisture content.

The interest of H. A. Smith in the Chippewa Feed & Grain Company of Buffalo, N. Y., has been sold by him to M. C. Burns. Mr. Burns succeeds him as president of the company. Mr. Smith will continue the wholesale feed business on his own account.

## ILLINOIS

The Farmers Elevator at Seymour, Ill., is under the management of U. Hieronymus.

The elevator at Farmingdale, Ill., is now under the management of Harry McMillan, Jr.

The Alta Farmers Elevator Company of Alta, Ill., has appointed Cumner Livingston as its manager.

The Farmers Elevator Company of Bushnell, Ill., has bought the elevator and feed mill of the Nagel Bros.

Fred F. Munson is succeeded as manager of the Farmers Elevator Company at Arcola, Ill., by P. B. Rolling.

The B. P. Hill Grain Company of Forreston, Ill., is under the management of Victor Kinma, formerly of Axtell, Neb.

The Dorchester Co-operative Elevator Association of Dorchester, Ill., is under the management of C. L. Cameron.

Capitalized at \$10,000, the Farmers Co-operative Elevator & Warehouse Company has been incorporated at Coulterville, Ill.

The Hammond (Ill.) Co-operative Grain Company is under the management of L. P. Kizer. He was formerly located at Decatur.

The Virden Grain Company of Virden, Ill., has changed its operating policy and hereafter will be conducted on a co-operative basis.

Farmers around Barclay, Sangamon County, Ill., are interested in the organization of a company to build and operate a grain elevator there.

The contract has been let by M. A. Kirk of Bondville, Ill., for the erection of a new 50,000-bushel elevator. This replaces the one which burned last July.

The grain elevator of J. C. Madden at Varna, Ill., has been purchased by a Streator, Ill., company, represented by Mr. Murdoch. The consideration was \$7,100.

A new elevator has been built at Verona, Ill., by the Verona Farmers Elevator Company, which handles lumber, coal, salt, building materials and other sidelines.

The Port Byron Grain & Fuel Company of Port Byron, Ill., has been reorganized into a co-operative farmers company. The capital stock of the firm is \$50,000.

The Farmers Grain Company of Missal, Ill., is now under the management of R. E. Jacobs. He is successor of H. E. Crum, who is now manager of the Farmers Co-operative Elevator Company of Leonard.

The Farmers Elevator Company is succeeded at Graymont, Ill., by the Graymont Co-operative Company. The capital stock of the firm has been increased from \$30,000 to \$60,000. There has been no change in the policy of the firm.

The Farmers Elevator Company of Meredosia, Ill., has completed a 10,000-bushel ear corn elevator. It is to be operated in connection with its 50,000-bushel grain elevator. The equipment includes one leg with 15x7-inch buckets, chain feed conveyors, one dump and a 150-bushel Howe Hopper Scale.

Geo. Harsh and P. W. Harsh, operating as the Terminal Grain Company at East St. Louis, Ill., have sold their Terminal Elevator to A. H. Beardley and T. M. Scott. They will operate as the Terminal Elevator Company. The elevator has a ca-



capacity of 100,000 bushels, and is operated by electricity. A. H. Beardsley is president of the company and T. M. Scott, is secretary.

The capital stock of the Leonard Elevator Company of Leonard, Ill., which was recently reorganized into a co-operative concern, has been increased from \$17,500 to \$20,000. H. E. Crum is manager.

C. E. Fair, Geo. C. Richmond and Wm. Scholtzhauer have filed articles of incorporation as the Oquawka Grain & Supply Company of Oquawka, Ill. The capital stock of the firm is \$6,500. The company has taken control of the local grain elevator.

The Hartley Elevator at Chrisman, Ill., has been purchased by R. L. Waldruff, from the estate of the late A. K. Hartley. He will operate it under the name of the R. L. Waldruff Grain Company. Mr. Waldruff also operates elevators at Scott's Crossing and Chrisman.

## WESTERN

Herman Ehler is agent for the Powers Elevator Company of Pompeys Pillar, Mont.

The Cramer Mill & Elevator Company of Clovis, N. M., has completed its new elevator.

The Farmers Grain Company has completed its new elevator at Steamboat Springs, Colo.

An elevator is to be constructed at Canyon City, Colo., for the Peerless Flour Mills Company.

A new elevator has been completed at La Fayette, Colo., by the Farmers Union Elevator Company.

The Wibaux Co-operative Elevator Company of Wibaux, Mont., is under the management of H. N. Cummings.

A. R. Smith has remodeled his elevator at Gillette, Wyo. Modern machinery has been installed, including motors.

The Farmers Market Company is interested in the erection of two new elevators in the vicinity of Cheyenne, Wyo.

A site at Mosquero, N. M., has been purchased by the Mesa Cooperative Association on which it will erect a grain elevator.

The capital stock of John B. Stevens & Co., Inc., dealers in grain, flour and feed, of Tacoma, Wash., has been increased to \$100,000.

A grain elevator is to be built at Lincoln, Calif., by the Lincoln unit of the Placer County Farm Bureau. The plant will cost \$15,000.

The Farmers Elevator Company has purchased from the Equity Co-operative Association the grain elevator located at Highwood, Mont.

The Farmers Co-operative Elevator of Joliet, Mont., has been reorganized and has resumed operations. A. M. Peterson is manager.

The elevator of the Benchland Co-operative Elevator Company at Benchland, Mont., has been leased by the Montana Elevator Company.

The Sunnyside, Wash., branch of the Neil Bros., grain brokers of Seattle and Spokane, Wash., is under the management of Chas. E. Johnson.

The Wolf Point, Mont., elevator of the Winter-Truesdell-Ames Company has been sold by that company to the Wolf Point Grain Company.

A new elevator is to be erected at Hysham, Mont., for the Montana Grain Growers Association replacing the one which was recently destroyed by fire.

The Gallatin Valley Milling Company will operate under lease the elevator at Fairfield, Mont., owned by the Farmers Co-operative Association.

The property of the Farmers Elevator Company at Springer, N. M., is to be taken over by H. G. Dorn. He will equip the elevator with a feed mill.

The Montana Grain Growers Elevator Company has purchased and will operate the Montana Equity Elevator Company's elevator at Big Timber, Mont.

The Excelsior Flour Mills have sold their elevator at Darlow (St. Vrain p. o.), Colo., to the Farmers Elevator Company. Fred I. Nickell is manager.

To erect and operate a grain elevator and mill, the Artesia Gin & Elevator Company has been incorporated at Artesia, N. M. The firm is capitalized at \$100,000.

Business operations have been resumed in the elevator of the Montana Elevator Company at Lavina, Mont. T. H. Hendershott is manager of the elevator.

Four grain elevators are to be built, at Hickman, Patterson, Montpelier and either Modesto or Turlock, for the Stanislaus County Farm Bureau, which has its headquarters at Fresno, Calif.

The Ray & Smith Company, Inc., composed of D. G. Ray and Arthur C. Smith, has purchased the grain, flour, millfeed and hay business of the E. Rohlfing Company of Portland, Ore.

J. F. Waide succeeds W. J. Davis as manager of the Farmers Warehouse & Elevator Company at Deary, Idaho. Mr. Waide formerly conducted the Kendrick Rockdale Warehouse at Kendrick.

The Miller Bros. Company of St. Anthony, Idaho, is succeeded by the Miller Bros. Grain Company. The company is capitalized at \$100,000. The firm

operates and owns elevators at Chester, Drummond, Ashton and St. Anthony. W. L. Miller is president; J. H. Roberts, secretary-treasurer and general manager.

The elevator and business of the Eads Company at Eads, Colo., has been purchased by the Crowley County Milling & Mercantile Company. The company will conduct a general grain, feed, and coal business.

Geo. Thorson, T. A. Bunby and Frank Morgan have filed articles of incorporation as the Morgan Company of Townsend, Mont. The company will conduct a grain and hay business. Capital amounts to \$10,000.

Grain elevators are to be established at both Hamilton and Woodside, Mont., by farmers in the vicinity of those two towns. L. J. Nordheim, E. A. Willard, Geo. Hudson, C. P. Front, T. B. Reagan, John Cobb and others are interested.

The holdings of the Milwaukee Grain & Elevator Company around Malden, Wash., have been sold to The White Dulany Company of Seattle, Wash. Thos. Hemp, who conducted the branch for the Milwaukee firm, has been removed to Rosalia.

Larry Price has become associated with the Downey Grain Company of Downey, Calif. The company has leased the large warehouse of the Newmark Grain Company there. Mr. Price was formerly with the Pacific Wood & Coal Company.

E. C. Cluster has sold his grain warehouse interests at Pomeroy, Wash., to N. C. Donaldson, lessee of the Cluster warehouse. A. Halterman, owner of a half interest with Mr. Donaldson, will continue the business. Mr. Cluster had been in the grain business for 22 years.

## MINNESOTA AND WISCONSIN

The Hanson Bros. of Ashland, Wis., have equipped their plant with a Carter Disc Separator.

A grain, feed and flour business is to be conducted at Mountain, Wis., by J. M. Anderson.

The Farmers Co-operative Exchange of West Bend, Wis., is under the management of Mr. Kline of Allenton.

A wild pea separator has been installed in the elevator of the Nicollet Farmers Exchange of Nicollet, Minn.

The name of the St. Cloud Equity Company of St. Cloud, Wis., has been changed to that of the St. Cloud Equity Association.

A warehouse at Algoma, Wis., has been purchased by the Algoma Co-operative Company and will be used for storing grain, flour and feed.

A. F. Fitch is president of the Farmers Elevator Company recently organized at Lake Crystal, Minn. The capital stock of the firm totals \$10,000.

The charter of the Farmers Co-operative Company of Spencer, Wis., has been amended and capital stock increased from \$10,000 to \$25,000.

R. Carlson, J. D. Rowe, Nick Abraham and others have incorporated the Farmers Co-operative Association which will operate at Lake Nebagamon, Wis.

Cleaning machinery is being installed and improvements are being made to the elevator of H. B. Borneman at Pettis (R. F. D. St. Peter), Minn.

The Saxon Co-operative Association has been incorporated at Saxon, Wis., by John H. Melchert, T. E. Naulea and others. The firm is capitalized at \$15,000.

The Halquist Bros. have purchased the Victoria Elevator at Hector, Minn., from V. H. Smith. They are wrecking it and will use the lumber for other purposes.

The Farmers Co-operative Elevator at Stewart, Minn., is to be conducted under the management of A. E. Pearson. C. F. Sieckert recently resigned from the position.

The elevator, the warehouse and the mill of the Lincoln Milling Company at Merrill, Wis., are to be improved and the capacity of each increased in the near future.

The stockholders in the Redwood Falls Elevator, Redwood Falls, Minn., have voted to conduct the business on a co-operative basis hereafter instead of as a stock company.

The C. W. Cheney Company of Eau Claire, Wis., has been dissolved. The company sold its grain and milling business some time ago to the Wisconsin Grain & Cereal Company.

The Donahue-Stratton Company of Milwaukee, Wis., has leased the Rialto Elevator. Elevator "A" which the Donahue-Stratton firm formerly operated burned a short time ago.

The Farmers Elevator at Neillsville, Wis., has been purchased by J. L. Kleckner, who has been in the feed and flour business there for a number of years. Mr. Kleckner will conduct his new acquisition under the name of the Kleckner Elevator Company.

Articles of incorporation have been filed by the Withrow Farmers Co-operative Elevator Company of Withrow, Minn. The capital stock of the firm is

\$10,000. R. A. Wagner, James Greenwalt, Oscar W. Hanson, R. Hodnett, Julius Stenberg, N. Plaisted and H. F. Godeman are interested.

S. A. Simmons, A. R. Lawton, C. D. Hill and others have filed articles of incorporation as the Viola Co-operative Association of Viola, Wis. The capital stock of the firm is \$20,000.

Wm. G. Hill, M. Chata, C. Johnson and G. F. Fruit are among the incorporators of the Wheeler Equity Exchange which was recently organized at Wheeler, Wis. The firm is capitalized at \$1,000.

A company has been organized at Lakeville, Minn., to conduct a grain elevator business. The farmers of that vicinity are interested in the undertaking. W. C. Ackerman is secretary of the concern.

The business policy of the Farmers Elevator Company of Morristown, Minn., has been changed and hereafter the company will operate on a co-operative basis. It has been operating as a stock company.

To handle grain, hay, feed, produce, flour, etc., the Necedah Commission Company has been incorporated at Necedah, Wis., capitalized at \$5,000. C. L. Loersch, A. G. Steinbach and E. F. Berry are interested.

The Farmers Elevator Company of Morristown, Minn., will in the future conduct its business on a co-operative basis. This change in operating policy was made at the company's last annual meeting recently held.

The two elevators of the Farmers Elevator Company at Ceylon, Minn., have been remodeled. The total capacity of the elevators is now 65,000 bushels. The plants have been equipped with additional machinery, including automatic scales.

R. H. Lang, W. J. Feind, and O. T. Haberman are the incorporators of the Jefferson Co-operative Produce Company of Jefferson, Wis. The company will handle grain, farm produce, flour, feed, etc. The capital stock of the firm is \$20,000.

To handle grain, hay, livestock and farm produce, the La Valle Equity Shipping Association has been incorporated at La Valle, Wis. The firm is capitalized at \$10,000. F. Smith, L. T. Pearson, H. Diece, F. Sheldon and O. Hochmuth are interested.

## IOWA

F. Sullivan has purchased Horace A. Noble's interest in the Noble & McBride Elevator at Hamburg, Iowa.

The elevator of R. L. Staben at Ireton, Iowa, has been overhauled and equipped with a 10-ton dump scale.

M. C. Rucker of Vining, Iowa, has sold his Vining Elevator to the Home Lumber Company of North English.

The Farmers Elevator Company of Guthrie Center, Iowa, is under the management of W. M. Browning.

The Farmers Elevator Company of Lavinia, Iowa, has elected Harry Werder as manager, succeeding A. P. Butts.

The capital stock of the Farmers Elevator Company of Mt. Union, Iowa, has been increased from \$8,000 to \$50,000.

The capital stock of the Farmers Elevator & Supply Company of Langdon, Iowa, has been increased from \$4,000 to \$50,000.

The Tara Grain Company has completed its new hollow tile elevator at Tara (Fort Dodge p. o.), Iowa. A. F. Lex is manager.

The elevator of the Farmers Co-operative Association at Winterset, Iowa, is under the management of F. C. Moreland of Earlham.

The Armour Grain Company's Elevator at Kennedy, Iowa, has been purchased and is being operated by the Farmers Elevator Company.

The Farmers Elevator Company has purchased the elevator of J. E. Strain at Nodaway, Iowa. Mr. Strain is now out of the grain business.

Capitalized at \$25,000, the Farmers Stock & Grain Company has been incorporated at Gravity, Iowa. J. H. Pichering is president and E. E. Yaloe, secretary.

A grain business is to be conducted at Shenandoah, Iowa, by T. J. and J. L. Gwynn. They will handle grain through the Shenandoah Milling Company's elevator.

The Dixon Co-operative Elevator Company of Dixon, Iowa, is to be operated under the management of Robt. Siebke. Louis Wunder was formerly manager of the plant.

John Miller of Milwaukee, Wis., recently purchased the old Stuhr Elevator at Davenport, Iowa, at a sheriff's sale. The elevator was occupied by the Bell-Jones Company.

Kinney & Hillhouse of Red Oak, Iowa, have dissolved partnership. The elevator will be conducted by Ralph Hillhouse, who has purchased his partner's interest in it.

A. R. Thompson and L. O. Thompson have formed a partnership and have purchased the interest of the latter's father, O. J. Thompson, in the elevator,



livestock and coal business at Northwood, Iowa, conducted under the name of O. J. Thompson & Son. The new company will be known as the Thompson Elevator Company.

The Knierim Farmers Grain & Coal Company has been incorporated at Knierim, Iowa, capitalized at \$100,000. Fred Quade, Wm. Hammerle and W. G. Zell are the incorporators.

The Farmers Elevator Company has completed its new 35,000-bushel reinforced concrete elevator at Somers, Iowa. The plant is operated by a 15-horsepower Fairbanks Gas Engine.

The grain department of the Farmers Terminal Elevator Company of Sioux City, Iowa, is now under the management of Geo. O. Strom. He was until recently in charge of the Sioux City office of the Taylor & Bournique Company.

## SOUTHERN AND SOUTHWESTERN

A new elevator has been completed and put into operation at Goltry, Okla.

A grain elevator costing \$250,000 has been completed at Plainview, Texas, by A. G. Hinn.

A grain, flour and hay business has been opened at Marshall, Texas, by the Pitts-Lathrop Company.

Extensive repairs have been made to the Chattanooga and Hollister, Okla., elevators of G. G. Black.

The Weleetka Elevator and Mill at Weleetka, Okla., have been purchased by J. B. Bates of Okmulgee.

The new 13,000-bushel elevator of the Sun Grain & Export Company at Fairmont, Okla., has been completed.

The Gibbons Elevator Company of Purcell, Okla., has purchased the Wells Elevators at Washington and Cole, Okla.

C. Lowery, Chas. Thompson and Cates Smith have incorporated the Rusk Co-operative Society of Rusk, Texas.

The Altus, Dill and Orienta, Okla., elevators of the Cox-Henry Grain Company of Altus, Okla., have been repaired.

The Cheyenne Co-operative Grain Dealers Association of Cheyenne, Okla., has started the erection of a grain warehouse there.

The old Riverside Grain and Hay Warehouse at Memphis, Tenn., has been leased by T. H. Berry and will be operated by him.

The business at Jackson, Miss., formerly conducted by P. L. Britton is in the future to be conducted by Robert Field & Co.

The elevators of the Mead Grain Company and the Union Grain Company at Welch, Okla., have been purchased by S. B. Campbell.

Capitalized at \$10,000, the Checotah Mill & Elevator Company has been incorporated at Checotah, Okla., by J. N. Young, W. I. Cook and J. A. Hurt.

A. J. Durham has purchased the grain and produce business of D. B. Porter at Belton, Texas. Mr. Durham was formerly a partner in the business.

Oil burners are to be used in the future for the boilers in the plant of the Perry Mill & Elevator Company of Perry, Okla., instead of coal burners.

R. W. Waterman, J. E. Hogan and G. W. Walker are interested in the Tyler Farmers Co-operative Society which was recently incorporated at Tyler, Texas.

The Wichita Mill & Elevator Company of Humphreys, Okla., has let the contract for overhauling its elevator at Humphreys, Frederick, Tipton and Hollister.

T. J. Williams, S. H. Burris and Bessie B. Burris have incorporated the Farmers Supply Company of Sutherland Springs, Texas. The company is capitalized at \$7,000.

Capitalized at \$30,000, the Venus Mill & Elevator Company was incorporated at Venus, Texas. The incorporators are: W. J. Alexander, C. E. Gidden and O. M. Renfro.

A wooden elevator is to be erected at Sayre, Okla., for Oscar Ewton, a grain man. The elevator is to be equipped with electric lights and with modern unloading appliances.

A 1,250,000-bushel elevator is to be established at Oklahoma City, Okla., for the Oklahoma Terminal Elevator Company. The capital stock of the firm amounts to \$750,000. The company will also establish a warehouse there.

D. Ballew, A. J. Epstein and Robt. L. Colding have filed articles of incorporation to operate a grain, flour, hay and feed business as the Savannah Flour & Feed Company at Savannah, Ga. The capital stock of the firm is \$10,000.

J. M. Frame, E. D. Martin, P. A. Frame, G. M. Brase and M. T. Martin are the incorporators of the J. M. Frame Company of Charleston, W. Va. The company will deal in grain, feed, etc. The capital stock of the organization amounts to \$25,000.

The grain and feed business of the Ruef Bros. at Covington, Ky., has been purchased by the Grain Products Company of Cincinnati, Ohio. The busi-

ness will hereafter be conducted under the name of the Ruef Bros. Company, and will be enlarged in the near future.

H. E. Rogers and G. P. Kuykendall have purchased the elevator of the Muleshoe Elevator Company of Muleshoe, Texas. They will operate it as the Texas Elevator Company.

The Folwell-Ahlskog Company of Chicago has received a preliminary contract from the city of Norfolk, Va., for the \$1,000,000 grain elevator which the city is interested in building.

To conduct a grain and hay business and to handle country produce, the W. G. Phillips Produce Company was recently incorporated at Jasper, Tenn. W. G. Phillips is manager.

The Waldman Ross Grain Company of Sour Lake, Texas, has sold out to the Sour Lake Grain Company. The new owners will conduct under their old name with R. M. Campbell as manager.

The capacity of the elevator of the Farmers Union Co-operative Association at Arapaho, Okla., is to be increased. A new corn sheller and cleaner has been installed. W. M. Black is manager.

J. E. Nixon, W. A. White, F. D. Vermilya and J. E. Wirick have incorporated at Atlanta, Ga., as the Vermilya Company, Inc., and will handle grain, feed, hay, and flour. The firm is capitalized at \$5,000.

New and modern machinery has been installed in the Valdosta Mill & Elevator Company's plant at Valdosta, Ga. This is one of the largest and best equipped plants in that section of the Southeast.

A building costing \$25,000 is to be erected at Marlin, Texas, for the I. N. Conyers Livestock & Feed Corporation. The building when completed will be used for the company's wholesale grain, hay and feed business.

## MISSOURI, KANSAS AND NEBRASKA

The Farmers Elevator Company has been organized to operate at Arlington, Kan.

The Aug. Rohling Elevator at Tecumseh, Neb., has been purchased by T. J. Gordon.

Construction work is nearly completed on the new Farmers Elevator at Martinsburg, Mo.

The Canton Co-operative Elevator Company of Canton, Mo., will erect a grain elevator there.

The Farmers Elevator at Iantha, Mo., is to be conducted under the management of Geo. Wolf.

Capitalized at \$25,000, the Farmers Grain & Coal Company has been incorporated at Seward, Neb.

John Neel's grain business and mill at Mound City, Kan., has been purchased by Oscar Ware.

F. L. Moss is manager of the Richland Grain Company, Richland, Kan., succeeding Geo. Moss, his son.

A new elevator is being erected at Wilcox, Mo., by the Great Western Elevator Company of Omaha, Neb.

A new elevator is to be erected at Hoisington, Kan., for the Redetzke Bros. J. L. Redetzke is manager.

Arthur Wolf succeeds C. M. Schupp as manager of the Farmers Elevator Company of Pleasant Green, Mo.

The Farmers Elevator at Brunswick, Mo., is under the management of Robt. L. Carter of Carrollton, Mo.

Wm. Kayser is succeeded as manager of the Farmers Elevator Company at Hildreth, Neb., by R. D. Cole.

The Dodge Farmers Union has been incorporated at Dodge, Neb., capitalized at \$75,000. E. F. Novak is president.

The Farmers Elevator at Alda, Neb., has been leased by E. L. Thelan. He will conduct a general grain business.

An automatic shipping scale has been installed in the elevator of the Morrison Grain Company of Stockton, Kan.

A new elevator is to be built this spring by F. C. Krother on the site adjoining his old elevator at Fremont, Neb.

The Farmers Mercantile & Elevator Company of Orrick, Mo., has employed Geo. Herman of Chillicothe as manager.

G. R. Kirby's elevator at Rock, Kan., has been purchased by the Rock Farmers Union. H. E. McDaniel is manager.

The Derby Grain Company has purchased the elevator of B. B. Brahmstadt at Hallem, Neb. M. E. Vinning is manager.

J. A. Harvey is manager of the Farmers Union Elevator at Tecumseh, Neb. W. A. Goosman is new manager of the plant.

Fred E. Ream succeeds Geo. Bente as manager of the Green Ridge Farmers Elevator & Trading Company of Sedalia, Mo.

The elevator and the mill of Edgar Schwald at Cole Camp, Mo., have been disposed of by him to the Producers Exchange.

The plant of the May Grain Company of Independence, Mo., is to be repaired. A corn cleaner, dump, chain drag, elevator supplies, feed mill, grain

cleaner, oat clipper, automatic scale, hopper scale, electric motor, wheat scourer and cracked corn cleaner have been installed.

The elevator of Jay Pinney & Son at Ford, Kan., has been sold to Chas. E. Stuart of Dodge City. He took possession on March 1.

The elevator of the Equity Elevator Company at Arapahoe, Neb., has been equipped with a 15-horsepower electric motor.

Young & Collingwood have purchased the Shute Elevator at Santanta, Kan. Mr. Shute will remain in charge until next summer.

The Farmers Elevator at Wakefield, Neb., is under the management of Chas. Busby. He succeeds M. I. Carlson who resigned.

Two 20-horsepower dynamos and one smaller one have been installed in the plant of the Geneseo Grain Company of Geneseo, Kan.

The plant of the Fort Scott Grain & Implement Company at Fort Scott, Kan., has been equipped with an automatic shipping scale.

To handle grain and other products, the Farmers Co-operative Society has been incorporated at Laredo, Mo., capitalized at \$10,000.

The old elevator at Ingalls, Kan., has been purchased by A. Hewes. The elevator has been operated under the management of Bill Westfall.

The Ewart Grain Company of Lincoln, Neb., is increasing its storage capacity 30,000 bushels by the erection of an annex to its concrete elevator.

To operate a grain elevator, produce exchange and livestock business the Farmers Elevator Company was recently incorporated at Speed, Mo.

The Farmers Elevator Company of Hill City, Kan., is now under the management of John Ashcroft. It was formerly managed by R. H. Odle.

The capital stock of the Farmers Union Elevator Company of Bloomfield, Neb., has been increased to \$50,000. Chas. Busskohl is president of the firm.

The capital stock of the Farmers Union Elevator Company of Nelson, Neb., has been increased to \$10,000. W. W. McCutcheon was elected president.

The mill of the Torpin Grain Company of Oakdale, Neb., located at Petersburg, has been sold. The Torpin company is now out of the milling business.

Fred Hanson has severed his connection with the Bartz Grain Company of Topeka, Kan., and is now with the Golden Belt Grain & Elevator Company.

The elevator of John Wolfersperger at Minneapolis, Kan., has been sold to the Consolidated Mill & Elevator Company. Possession is to be given in June.

F. E. Young and others have filed articles of incorporation at Walthill, Neb., as the Farmers Elevator Company. The organization is capitalized at \$30,000.

J. T. Hill, Jacob Huiting and J. H. Voss have incorporated the Voss Grain & Seed Company of Downs, Kan. The capital stock of the firm is \$20,000.

Capitalized at \$10,000, the Farmers Elevator & Exchange Company has been incorporated at Madison, Mo. The company will erect a grain elevator later on.

Capitalized at \$50,000, the Platte Center Co-operative Elevator Association has been incorporated at Platte Center, Neb. J. L. Collins is treasurer of the firm.

The Associated Mill & Elevator Company of Kansas City, Mo., has purchased the Melvern Grain Company of Melvern, Kan. S. W. Bennett is local manager.

The Farmers Co-operative Elevator is succeeded at Rhineland, Mo., by the new Co-operative Association No. 230. The new organization is capitalized at \$15,000.

The elevator at Loomis, Neb., formerly owned by Bodman, McConaughty Company has been purchased by Sells & Rector, whose headquarters are at Holdrege.

The complete stock of the Sellars Grain Company at Lathrop, Mo., has been sold by it. The company closed out and gave possession of its building on March 1.

The elevator of the Farmers Union Co-operative Elevator Company at Pomona, Kan., has been purchased by the Pomona Livestock & Grain Company. Possession has been given.

On February 9, the Exchange Elevator of St. Louis, Mo., withdrew as a regular elevator from the Merchants Exchange. The elevator was operated by George Harsh & Co.

A co-operative grain and livestock company has been incorporated at Smithville, Mo., by farmers around there. The company is capitalized at \$50,000. N. M. McDaniels, E. R. Streeter, E. R. Breckenridge, G. C. Walker and C. G. Turner are interested.

Farmers around Fairbury, Neb., have organized and purchased the 30,000-bushel elevator there formerly owned by the Jansen Equity Exchange. The



consideration was \$13,500. M. Coffman is president; I. Junker, vice-president; Chas. M. Turner, secretary.

The Farmers Elevator Company has completed its new elevator at Hume, Mo. The elevator has two large tanks with capacity of 15,000 bushels. Modern machinery is to be installed.

The Farmers Union Elevator at Dubois, Neb., is under the management of Wm. Droge. He is assisted by D. Newman. Ed Rehlimer, who until recently was manager, has resigned.

Capitalized at \$25,000, the Farmers Union Co-operative Company was incorporated to operate at Inman, Neb. The incorporators are: N. C. Christianson, J. A. Clifford and Forrest Smith.

Denton & Limbocker of South Mound, Kan., are succeeded in business there by the Farmers Union Co-operative Association of South Mound. They operate only elevator there. Frank Johnston is manager.

The Farmers Co-operative Elevator Company has completed a concrete feed warehouse at Abilene, Kan. The capacity of the warehouse is 4,000

bushels. The warehouse will be conducted in conjunction with the firm's elevators.

Farmers around Winfield, Kan., have organized a farmers union and will buy the Barlett Grain Company's elevator there. Newman Bartlett will be manager of the elevator.

Improvements are to be made to the elevator of the La Grange Elevator Company of La Grange, Mo. New machinery is to be installed during the time of alterations. W. J. McPike is manager.

A 22,000-bushel elevator has been completed at Gorham, Kan., for the Kansas Flour Mill Company. The equipment includes an automatic scale, a 10-ton Howe Truck Scale and a Globe Dump.

New concrete driveway, dumps, and machinery have been installed in the elevator of the Nye, Schneider & Fowler Company at Gordon, Neb. New electric motors have also been installed.

C. W. Bauer of Junction City, Kan., has made plans for going into the grain business for himself and will build an elevator there. He was formerly associated with the Farmers Union Elevator at Alida.

gether with 5,000 bushels of wheat. Senator Geo. L. Bartlett and H. R. Spring are the owners of the company.

Regent, N. D.—The elevator here was burned with a loss of \$40,000. About 20,000 bushels of grain were also destroyed.

Denison, Iowa.—E. L. Baum's Northwestern Seed House was damaged by fire recently. The loss is covered by insurance.

Smymna, N. Y.—Simmons & Coye lost their feed store here by fire recently. The blaze is believed to have started in the engine room.

Tulsa, Okla.—Fire destroyed the store and warehouse of the Gantz Hay & Feed Company. The company was owned by K. M. Gantz.

Booneville, Mo.—Fire destroyed the grain elevator of Holman Lee. The grain was covered by insurance; the elevator was a total loss.

Maxwell, Texas.—Fire destroyed two warehouses located on the Martindale Seed Farms. The warehouses contained 1,000 tons cottonseed.

Ft. Worth, Texas.—Fire of unknown origin destroyed Jay F. Wills' feed store located here. The loss of \$1,700 is partly covered by insurance.

Underwood, N. D.—Three elevators here were destroyed by fire, the origin of which is not known, on March 2. The loss is covered by insurance.

Atlanta, Ga.—Fire destroyed a considerable amount of grain and flour in the storehouse of W. E. Stenkey. The origin of the blaze is unknown.

Ovid, Colo.—The William Hopper Grain Company's elevator was burned on February 12. The elevator was just recently completed at a cost of \$16,000.

Munnsville Station, N. Y.—Two buildings of the Empire State Alfaifa Mills were destroyed by fire. Loss amounted to \$5,000; covered in part by insurance.

San Francisco, Calif.—Fire damaged the power plant of the Nolan Millfeed Company on February 14 with a loss of \$5,000. Rice and feed were stored in the building.

Fremont, Neb.—Fire damaged the building occupied by the Fremont Feed & Junk Company. The loss amounted to \$2,500. The origin of the blaze is unknown.

Pine Bluff, Ark.—The elevator and mill of the Marco Milling Company burned recently with a loss estimated at from \$250,000 to \$275,000. The company will rebuild at once.

Mesquite, N. M.—A. J. Jarrett's warehouse was burned on February 27. The building contained about 80 tons of hay at the time of the fire. The loss has not been estimated.

Delmont, S. D.—On March 7 fire destroyed the Farmers Elevator here together with 12,000 bushels of oats, corn and wheat. The loss of \$18,000 is partly covered by insurance.

Grove City, Ohio.—On February 18 the grain elevator and flour mill owned by C. L. Ecley were destroyed by fire. The origin of the fire is unknown. The loss is estimated at \$175,000.

Orleans, Mich.—M. L. Stout lost his grain elevator here by fire on February 26. The loss is estimated by Mr. Stout to aggregate \$15,000. One year ago an elevator on the same site was also destroyed by fire.

Silver Lake, Minn.—A. C. Navratil's elevator here was burned on February 19. The blaze is believed to have been started by defective wiring. There were about 8,000 bushels wheat stored in the elevator at the time of the fire.

Straubville, N. D.—Early in February the Farmers Elevator here burned. The blaze started when a gasoline engine backfired. The loss is covered by insurance. The contents, including 12,000 bushels grain, were also covered by insurance.

St. Johns, Mich.—The warehouse of the Albert Todd Company was burned on February 19. The fire was of unknown origin. The building loss amounted to \$2,175 with \$1,000 insurance; the stock loss, \$1,984.95, with \$1,984.95 insurance.

New Durham, N. J.—The hay shed of John E. Murray located in this city was burned to the ground, entailing a loss of \$50,000. The shed was 50x500 feet and was filled to capacity with hay. The insurance carried amounted to \$20,000.

A petition in bankruptcy has been filed by John W. Spence who conducted a grain and feed business at Fairfield, Ill. His liabilities are given as \$61,131.04; assets, \$10,940.35.

The demurrers raised by Herman Reger, grain grower, to the complaints brought by H. Groff, E. Hooker, John Colvin, were sustained by the Madison County Superior Court at Anderson, Ind. The plaintiffs were suing Mr. Reger for the difference in the price of corn which they contracted for at \$1.65 and which went down to 75 cents per bushel. They contended they had promised to pay Reger the difference in the price of corn if corn went up and upon this ground claimed that he should have allowed them the difference when it was in their favor.

## OBITUARY

**BLAKEMORE.**—Frank G. Blakemore, for more than 20 years active in the grain trade at Chicago and previously in Louisville, Ky., died on March 7 at Paris, Ky. He was unmarried.

**BLECKER.**—In February Warren C. Blecker died at Reading, Pa. He was a well known feed salesman and was connected with the Nowak Milling Corporation.

**BRANDENBURG.**—Frank Brandenburg died from pneumonia at his home in Maxwell, Ind., at the age of 56 years. He was a well known grain dealer. Two children survive.

**BROWN.**—Wm. L. Brown died aged 44 years at Wichita, Kan. He was manager of the Denver, Colo., office of the Warwick Grain Company. He was one of the oldest members of the Wichita Board of Trade.

**EIDMAN.**—On February 7, Daniel Eidman died suddenly at his home in Baltimore, Md. He was a member of the hay, grain and feed firm of H. D. Eidman & Bro. and was a member of the Baltimore Chamber of Commerce.

**GAIENNIE.**—Capt. Frank Gaiennie died not long ago at St. Louis, Mo., in his eightieth year. He was formerly president of the Merchants Exchange and had been a member of the organization for almost 50 years.

**GEGGIE.**—After a year's illness, James C. Geggie died at Minneapolis, Minn. He had been associated with E. S. Woodworth & Co., for 18 years. He entered the grain business at Duluth; went to Minneapolis in 1903 and associated himself with E. S. Woodworth & Co., and for 10 years has acted as pit trader for them. His widow and three sons survive him.

**GRIFFITH.**—H. Griffith died aged 88 years at Columbus, Ind. He was an old time grain man; he started in the business in 1845 and had been actively engaged up to the time of his death. He operated a grain elevator at Columbus, and was president of a bank there.

**KEYES.**—D. M. Keyes died recently from pneumonia. He was a retired grain man and hay merchant of Pana, Ill.

**PRANGE.**—Aged 86 years, Frederick Prange died at Indianapolis, Ind. He started in the grain and flour business in 1880 in the old Pearl Mill at Indianapolis. He retired from active business in 1912. His widow, two daughters and two sons survive him.

**PICKEL.**—Dr. James M. Pickel was killed by an automobile. He was feed chemist of the North Carolina Department of Agriculture and was living at Raleigh, N. C. His widow and six children survive him.

**RODEE.**—H. B. Rodee ended his life on February 10 by shooting himself with a shot gun. Mr. Rodee was manager of the Farmers Grain Company of Artesian, S. D. Financial troubles are believed to have caused him to take his life.

**ROTHSCHILD.**—Emil Rothschild committed suicide by asphyxiation. He was at one time a millionaire grain dealer and president of the Rothschild Grain Company of Omaha, Neb.

**SCHAAL.**—Paralysis caused the death of Chas. Schaal on February 24 at his home in Philadelphia, Pa. He was prominent in the grain and feed business; had operated an elevator and mill at Philadelphia for 35 years and had been a member of the Commercial Exchange for 31 years. His widow, three sons and a daughter survive him.

**SLICEOFF.**—John Sliceoff was found dead in his warehouse at Belle Plaine, Kan. He was a grain dealer and livestock man.

**SMITH.**—Marshall Smith was killed in the elevator of the Cogar Grain & Coal Company at Harrodsburg, Ky., where he is employed, on February 25.

**SPERRY.**—Apoplexy caused the death of Geo. B. Sperry, prominent grain dealer of Lone, Ore.

**SUTTON.**—Charles Sutton, a prominent hay and grain broker of Newton, Ill., was shot and killed, on February 15; his murderer later committed suicide. The motive for the slaying has not been established.

**TUBBS.**—Pneumonia caused the death of C. R. Tubbs, veteran member of the Minneapolis Chamber of Commerce. Mr. Tubbs started in the grain business in charge of the Alden, Minn., elevator of the Cargill Elevator Company; later he managed a station for the Minneapolis Northern Elevator Company. His widow, one son and one daughter survive him.

**TURPIN.**—Henry B. Turpin died at his home in Carrollton, Mo., on February 13. He was formerly in the grain and livestock business, but retired about 10 years ago.

**WOLF.**—Joseph H. Wolf died at home in Cincinnati, Ohio, on March 7. He was a retired grain and feed merchant. He is survived by three children.

## FIRES—CASUALTIES

Lamberton, Minn.—A loss of \$25,000 was incurred by fire in the elevator and mill of James Duncan.

Austin, Texas.—Fire destroyed the McKinstry Warehouse on February 22 entailing a loss of \$10,000.

Milnor, N. D.—Fire destroyed the Andrews Grain Company's elevator recently with a complete loss to owners.

Elk City, Okla.—Fire destroyed the mill, elevator and warehouse of the Farmers Milling & Supply Company on February 15. A considerable quantity

of hay, grain and feed was contained in the elevator and warehouse. The loss is partly covered by insurance.

Tolley, N. D.—Fire on March 2 destroyed the Farmers Elevator here. The loss included 30,000 bushels of grain.

Fennimore, Wis.—The Parker & Mitchell Company's feed warehouse was completely destroyed by fire not long ago.

Philadelphia, Pa.—Fire destroyed the Eastern Milling Company's flour mill and its elevators, to-



## FIELD SEEDS

## CLOVER RULING STRONG

"Clover continues to advance," says *Southworth's Weekly Market Letter* for March 12. "The long anticipated March demand has developed. Liberal shipments this week, 6,003 bags. Receipts 1,795 bags. Stocks here decreasing rapidly, now 7,400 bags. Dealers reporting excellent cash demand and look for it to continue. Cash Clover still commanding big premium, selling as high as 50 cents over March. For this reason there have been no deliveries on March contracts as yet. Both April and October ruling firm. Good demand on recessions. New York reports imports Red Clover 4,275 sacks. Exports 153 bags to Scotland."

## MIXED CARLOADS OF SEEDS

An order of dismissal has been made in No. 11089, Rudy-Patrick Seed Company vs. St. Louis-San Francisco, Director-General et al, opinion No. 6657, 60 I. C. C. 411-13, the Commission holding that freight charges on two mixed carloads of seeds shipped from Lamar, Mo., and Middleton, Okla., to Kansas City, were legally assessed and not unreasonable. Commissioner Eastman dissented, holding that while the classification rule was inapplicable to this shipment, the mixing rule was unreasonable in so far as it deprived the shipper of the benefit of the classification rule which would have resulted in lower charges.

"It seems to me," said Eastman, "that any rule which results in a higher charge on a mixed carload shipment at a carload rate than would result under the carload rate on one or more of the commodities and the less than carload rate or rates on the remainder, is unreasonable."

## TOLEDO SEED MARKET SHOWS STRENGTH

BY C. O. BARNTHOUSE

The seed market has developed considerable strength lately as it is now well liquidated and it takes little additional demand to cause an upturn in prices. If the European situation was cleared up so exports were possible the market could easily become much stronger, but as that is a far thought at the present time it isn't worth considering and leaves the market a home affair. The movement of Clover and Timothy have been quite liberal while the movement of Alsike has been small. Domestic requirements are not as yet taken care of and the movement for the balance of the month is expected to be very satisfactory. The winter has been mild, spring will likely be early and the April business will in all probability be much smaller than last year.

The closing prices of cash seed on March 10 were: Prime Clover \$12.70, Prime Alsike \$15.00, Prime Timothy \$2.95.

Receipts for the month: Clover 10,840 bags, Alsike 1785 and Timothy 2,236. Shipments: Clover 15,047, Alsike 1,743, and Timothy 4,962.

Movements—Season 1920-21: Receipts,—Clover 35,812, Alsike 5,293, Timothy 16,130. Shipments,—Clover 28,975 bags, Alsike 4,085, and Timothy 23,527. Prime seed graded on crop to date: Clover 17,250 bags, Alsike 900, Timothy 17,300.

Prices of seed bags effective March 4 were: Stark 34 cents, Boott 32 cents and Amoskeag 30 cents.

Seed storage rates for Toledo are:

	First 10-day period	Each succeeding 10 days
1 to 10 bags .....	\$0.10 per bag	\$0.05 per bag
11 to 20 " .....	.10 " "	.03 " "
21 to 37 " .....	.10 " "	.02 " "
38 to 50 " .....	3.50	.75
50 bags or over .....	.07 per bag	.01½ per bag

## MILWAUKEE SEED SITUATION

BY C. O. SKINROOD

The receipts and shipments of the two principal kinds of seeds indicate the striking restriction on receipts at Milwaukee during the month of February. During that month Clover seed receipts at Milwaukee were 70,480 pounds as compared with 628,436 pounds for February, 1920. Receipts were about nine times as large for the second month of 1920 as for the second month of 1921.

The holding idea seems to be less prevalent as far as Timothy seed is concerned. During February of this year the Timothy seed receipts were 210,000 pounds, as compared with 343,211 pounds for the corresponding month last year. Receipts of Timothy seed at Milwaukee were therefore about one-third less than last year.

Shipments, on the other hand, show an immense movement of Clover seed, the shipments for February, 1921 being no less than 740,069 pounds at Milwaukee as compared with 460,920 pounds for the corresponding month of 1920. Shipments for the

month were therefore about 60 per cent larger than a year ago.

Shipments of Timothy seed also show the same general trend as that of Clover. Shipments for the past month at Milwaukee were 299,081 pounds as compared with 162,088 pounds for the corresponding month a year ago. Shipments of Timothy were therefore almost twice as large as a year ago for the month under consideration.

Sales of seeds expressed by shipments have been much larger than a year ago while receipts have been much smaller than in 1920 for the same period. Shipments are apparently from older stores of seeds.

While the freight schedules of the Chicago, Milwaukee and St. Paul railroad have not recently provided for transiting of flax seed from Minneapolis moving on the proportional rate, the traffic department of the Milwaukee Chamber of Commerce had a meeting with the officials of the road and arranged the matter. Under the agreement made, the privilege of transiting flax seed from Minneapolis at Milwaukee will become effective in a short time.

Eleven men had their lives endangered by a mysterious explosion in the big linseed mill of the William O. Goodrich Company at Hopkins Road and 30th Street, just north of the city limits of Milwaukee. The men were working on a lower floor in the building when a mysterious night explosion took place, blowing out a brick wall 25 by 40 feet. The iron beams crashed through windows and tons of brick fell on the garage and machine shop adjoining. Fortunately, all the 11 men escaped injury. The loss was estimated at from \$30,000 to \$50,000, the fire following the explosion also doing some damage. One theory is that it was a grain dust explosion. The force of the explosion was felt principally some distance from the dust collecting system, so that this theory is not believed tenable. Another theory was that some men refused jobs, because there were no jobs available, had threatened to fire the plant. Two huge linseed oil containers of 100,000 gallons capacity each, stand just a few feet away from where the explosion occurred, but they were not damaged. Wm. O. Goodrich is the president of the concern. The plant is said to be the largest linseed oil mill in the state of Wisconsin.

One of the most recent seed organizations started in the state was the Soy and Bean Growers' Association in Kellner Portage County. Among the speakers were J. W. Brann of the University of Wisconsin, R. A. Peterson Wood County farm agent, and W. W. Clark, Portage County agent.

A heavy demand is reported in many departments of the seed trade by the Milwaukee Seed Company. The company says Red Clover has gone up about \$1.50 a bushel in the last two weeks because of the insistent buying. The buying, it is said, is especially from the small jobbing trade. For high grade domestic Red Clover seed the market is reported as ranging from 16 to 19 cents a pound. A very heavy demand is also reported by the company for Alsike, prices ranging from 17 to 22 cents a pound. The same company quotes the price of Timothy in car lots at 5 to 6 cents a pound. An excellent demand is also reported for high colored Alfalfa with the market up considerably in the last weeks and present prices ranging from 18 to 29 cents a pound. The low price for White Blossom Clover seed is believed to be responsible in part at least for the strong demand in this line. The company is paying from 6 to 7½ cents a pound for this class of goods.

A very active demand is also reported by the Courteen Seed Company with still heavier buying expected for the month of April. The company find that farmers have changed their attitude to a large extent in March and are selling their seeds quite liberally. For the last two weeks this company has had a very good buying movement.

The Kellogg Seed Company likewise reports a very decided improvement in the seed trade and this buying is expected to continue on through the month of April and perhaps longer. The company says that the farmers are letting go of their seeds more generally now, but the run of offerings is declared under those of a year ago. Higher prices are looked for by the Kellogg company if the strong demand keeps up.

A 50 per cent increase in business over a month ago is the optimistic report of the North American Seed Company. This concern also finds that farmers are selling with considerably more freedom but since farmers are not extremely eager to sell it is believed that prices might go higher if the demand becomes much stronger. Limited offerings of Red Clover are made, the North American says with prices quoted from \$17 to \$20. Supply of

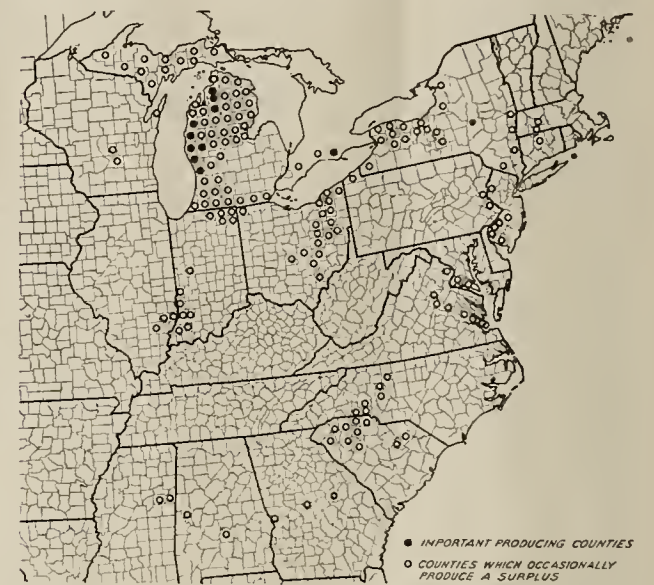
White Clover is also reported to be small with the prices ruling at \$40 to \$45. Alsike is also in limited supply with the market ranging from \$17 to \$22. Fairly liberal offerings of Timothy are reported at 6 to 6½ cents as the ruling prices. The good grades of Alfalfa are quoted from \$18 to \$24.

Just fairly good supplies of seeds are now coming from the farmers, in the opinion of the L. Teweles Seed Company. The situation is reported as bright and the company is busy taking care of the enlarged volume of receipts and shipments. The company hazards the estimate that the seed trade ought to be active to strong for at least one month. Quotations given by the company are \$17 to \$18 for Alfalfa, \$5 to \$5.50 for Timothy, \$15 to \$20 for Alsike, \$40 to \$45 for White Clover, and \$17 to \$20 for Red Clover.

## HAIRY VETCH SEED PRODUCTION IN THE UNITED STATES

Hairy Vetch seed has been produced in America since the plant was first cultivated here, but the real business of commercial seed production dates from 1915, when trade with Europe ceased, and Hairy Vetch became scarce. Michigan is the big producing state, furnishing probably 95 per cent of the commercial stock of Hairy Vetch seed.

In the years from 1915 to 1919 Michigan produced about 1,000,000 pounds annually, of which it is estimated about 5 per cent is used for replanting for seed, 20 per cent sold locally for general use, and



95 per cent enters the seed trade. This latter portion is usually sold directly to country elevators, or to the large seed jobbers. A few growers advertise locally and sell direct to consumers.

"On account of the rapidity with which the Hairy Vetch seed industry developed in Michigan," says Bulletin No. 876 of the Department of Agriculture, "some time was required to establish a satisfactory marketing system. This difficulty is being gradually overcome as business machinery for handling the crop becomes better organized. . . . No definite grades or classes of Hairy Vetch seed are recognized in the market, nor is there any great need for classification, as the crop is usually of even quality."

The accompanying map, which is taken from the bulletin, shows the localities in which Hairy Vetch is known to have been produced in commercial quantities since 1914. The bulletin also states that as far as is known, the seed can be produced commercially in any section where the crop is used. Apparently there are no localities better fitted than others for growing the seed.

## USE OF THE SEEDSMAN'S DISCLAIMER

The past and present methods of seed merchandising and lack of regulation to secure uniformity in such methods have made it seem necessary to the seed trade to adopt a protective device which is known as the "Seedsmen's Disclaimer," says Mr. W. A. Wheeler, in charge of Seed Reporting Service of the Bureau of Markets. The stated and implied object of this disclaimer has been to protect the seedsmen from matters in connection with the sale of seeds over which he has no control. It is always assumed without question in the commercial world that an individual or concern is responsible for its acts or the acts of its employees in all matters over which it has control. The use of the disclaimer in the conduct of a legitimate seed business probably has been wholly proper and necessary for the protection of that business. It, however, has been used in many cases as a cloak for the protection of unreliable dealers. This can not be questioned.

Proper legislation with a view to protecting the seedsmen as well as the consumer of seeds will make obsolete the disclaimer in its present form. It may be that some points in the disclaimer, such as guaranteeing productiveness, or assuming responsibility for the crop, may always continue to be appropriate. But the nonwarranty with refer-

*From Seed Reporter  
July, 1919*



# HAY, STRAW AND FEED

## HAY SITUATION AT CINCINNATI

D. W. Hopkins of the Mutual Commission Company of Cincinnati, Ohio, sums up the hay situation as follows in a recent market letter:

"Bad roads, poor weather conditions and low prices all working together shut off to a great extent the new country loadings and we believe that we are going to receive light receipts for a few days at least. Top grades of hay are meeting with an excellent demand. A large amount of roughage in the South has been cleaned up so that we are getting an improved demand, but this demand is confined almost entirely to the top grades of hay.

"It is getting very late in the season for Clover and Alfalfa so we really believe that every shipper should take advantage now. The good demand we are having for these commodities will not last much longer. If receipts fall off right now we will undoubtedly get a slight reaction and every shipper will undoubtedly want to take advantage of that reaction, for there is still such a large amount of hay in the country to be marketed that any advance will probably be of short duration."

## MINIMUM WEIGHTS ON HAY

Inasmuch as Alfalfa hay varies in weight according to the season in which it is cut the Commission has dismissed No. 11212, S. J. Hawkins doing business as the Rupert Milling Company, et al. vs. Oregon Short Line, Director General et al., opinion No. 6607, 60 I. C. C. 188-90, holding that the minimum weights on hay from Rupert, Idaho, and other adjacent points had not been shown to have been or to be unreasonable or otherwise unlawful.

The complaint was directed almost chiefly against the minimum weights prescribed for cars less than 36 feet in length. The testimony, according to the report of the Commission, which was written by Commissioner McChord, showed that the weight of bales differed, depending on the density of their compression and the condition of the hay when baled. The condition and density in turn depended according to whether the Alfalfa bale was a first, second or third cutting from the same field. The complainant said that the length of the car was not the only thing to be considered; that the height ought to be considered but was not in prescribing the minima.

Mr. McChord said that it did not appear that the minimum weights attached were not much, if any, out of line. A reduction in the minimum weights he said would produce what would seem, from the record, to be an unjustifiable reduction in the revenues of the carriers and that a reduction was not warranted in a record so narrow in its scope as this one had been.

## THE TRADE'S OPINION ON UNIFORM HAY GRADES

Since the passage by the Sixty-sixth Congress of the law providing for the Federal inspection of hay, says the *Weekly News Letter* of the Department of Agriculture, there has been much discussion among shippers, dealers, and consumers of hay as to the benefits to be derived from such a law.

In order to determine the attitude of the great body of people interested in the marketing of hay toward the provisions of this law, and also to learn just what grades are now used at the various markets and the methods by which they are applied, as well as the market practices relative to the issuance of certificates and like matters, the Bureau of Markets of the United States Department of Agriculture has made a comprehensive survey of the hay market situation throughout the country.

In connection with this survey, schedules were sent to a list of about 15,000 persons who were interested in some phase of hay marketing. These schedules requested the opinions of the recipients relative to various factors which are of importance in the marketing of hay, including present standards or grades for hay, terminal market inspection service, Federal hay grades, and Federal inspection.

The schedules returned indicate a widespread and general dissatisfaction with present hay grades and their general application. . . . Of those replying to the questions on the schedules, 87 per cent favored Federal grades and 84 per cent favored Federal inspection.

Federal standards are favored principally because of the fact that their use throughout the country would make for uniformity of grades, and buyers then could know that when a certain grade of hay was quoted from a certain section of the country the same character of hay was being offered as that from other sections when a like grade designation was stated.

It is also felt that Federal grades would probably

be more explanatory than some grades now in use and would describe more accurately the character of the commodity to which the grade was applied. This feeling is no doubt based on the experiences of the trade with Federal standards for grain and cotton, the uses of which are proving so satisfactory to all agencies interested in the marketing of those commodities.

The inspection of hay by Federal hay inspectors under the supervision of the United States Department of Agriculture is favored because that appears to be the only impartial agency qualified to undertake such an important task. Such inspectors would be interested only in the quality or grade of the hay and in the assigning of the proper grade designation. They would have no pecuniary interest in the hay nor any business relations in regard to salary or other compensation with anyone interested in the marketing of the hay. All Federal inspectors would be subject to the same regulations respecting the application of grades and the issuance of grade certificates and will have received the same training in preparation for their work.

The law providing the Federal inspection of hay makes such inspection available to all interested parties, so that shippers and receivers, as well as dealers in terminal markets, may have the protection which such an inspection and certification of grade provides.

Work on the preparation of Federal standards for hay is progressing rapidly at the hay standardization office located at Alexandria, Va., and the Department will be prepared to establish a hay inspection service at several important hay markets as soon as funds are made available for the work.

## BIG BREAK IN NEW YORK HAY PRICES

BY C. K. TRAFTON

It is doubtful if even the oldest member of the local hay trade can recall a month in which the dealings were so small as during the month just ended. In fact, demand was so utterly stagnant at times as to make it seem almost credible that some new substitute for hay as horse fodder had been discovered. The almost entire cessation of buying was clearly demonstrated by the fact that prices broke from \$4 to \$5 a ton within a few days in spite of extraordinary light arrivals, frequently not more than one-third as large as in ordinary times. It was realized, of course, that the small demand was chargeable mainly to the general mercantile stagnation, which naturally reduced trucking to a minimum. The heavy snow-storm of February 20 also restricted the use of horse trucks.

In view of the facts described the impression prevailed among many receivers that practically all local distributors as well as consumers had reduced their stocks almost to the vanishing point, and hence would soon be forced to replenish. These predictions were realized toward the end of February when buyers began to display much more interest. Still, the majority of them were still in a decidedly conservative mood, buying in the most cautious manner. Nearly all of them would take only the smallest quantity suitable for their immediate requirements, few if any being willing to take over a single car-load at one time. At this time they found a growing scarcity of sellers, who as a general thing asserted that they had disposed

ence to description, or quality, or purity, will necessarily become obsolete under constructive legislation.

Some of the best seedsmen, continued Mr. Wheeler, today recognize that the phrasing, use, and abuse of the disclaimer have been factors in the encouraging of noxious class legislation against seedsmen. I am not assuming that the disclaimer has not served a purpose, and has not perhaps been necessary in the ordinary conduct of business in the past. As a matter of fact, most agencies that buy and sell seeds, whether they be private or governmental, have used some form of disclaimer in the sale of seeds.

## VITALITY OF SEEDS DIMINISH WITH AGE

How long will seeds remain alive? The question is answered through tests made at the Ohio Experiment Station on the longevity of seeds, including corn, oats, soybeans and wheat. Tests were made with 25 different kinds of grain. With corn, seed gathered in 1908 and germinated during the 1920 season was very low in vitality. The grains produced very weak sprouts as compared with one-year-old corn.

While farmers as a rule do not keep grains for seed over long periods of time the tests show that there is a noticeable falling off in the growth and vigor of sprouts with increase of age; also that many seeds have low vitality when gathered during years of excessive humidity and rainfall. Oats and wheat seeds gathered in the summer of 1915 show extremely low vitality because the rainfall for July that year at Wooster was 8.35 inches—the heaviest precipitation for 33 years. The 33-year average rainfall for July at Wooster is only approximately four inches.

## SCARIFIER TAKES COATS FROM HARD GRASS SEED

Studies made at the Ohio Experiment Station show that legume seeds may be made to germinate quickly by passing the seeds through a scarifier, an instrument which rubs the seeds gently with sandpaper. Many legume seeds, such as Red Clover, Alsike Clover, Alfalfa and White Clover have hard coats, so that the seeds cannot germinate readily. The germination of White Sweet Clover was raised from 36 to 88 per cent by the use of such a machine at the Ohio Experiment Station.

Clover seed sown in the spring soon after the close of winter weather but early enough to encounter some freezing germinates fairly well; it has been found that 50 to 60 per cent of the seed grew readily when sown in this manner. Ordinarily, these hard seeds require almost three months to germinate if they are not scarified or frozen in the soil. The hardness of these legume seeds should be considered as a factor in securing good stands of Clover, it is stated.

A seed business is to be conducted at Muncie, Ind., by Frank Wilson.

The Werner Bros. of South Bend, Ind., have sold out their seed business to Dale A. Rowe.

The offices of the Springfield Seed Company of Springfield, Mo., are now located at 313 W. Walnut Street.

The Hopkins-Hamilton Seed Company, Ltd., of Nanaimo, B. C., has been incorporated, capitalized at \$25,000.

Incorporation papers have been filed for Walter S. Schell, Inc., of Harrisburg, Pa. The company will handle seed and cattle food. Capital stock is \$200,000.

Capitalized at \$20,000, the Doughten Seed Company was incorporated at Jersey City, N. J. G. A. Patten, G. L. Crusea and Ethel E. Pattison are the incorporators.

The Ferry's Seed Service has been incorporated at Wilmington, Del., capitalized at \$2,500. T. L. Crouten, M. A. Bruce and S. E. Dill are interested in the company.

The quarters of the Milwaukee Seed Company of Milwaukee, Wis., which were damaged by fire some time ago, have been remodeled and are now occupied by the seed firm.

To handle seeds and cattle food, the Taft Bros. were incorporated at Manhattan, N. Y., capitalized at \$15,000. C. Tingley, E. H. Tatum and F. H. Taft are the incorporators.

The Southern States are to be covered for the Williams Seed Company of Norfolk, Va., by Edgar S. Bryan. He was formerly with the D. Landreth Seed Company of Bristol, Pa.

D. D. Simmons, J. Simmons and James Withrow have filed articles of incorporation as the Minot Seed Company of Minot, N. D. The capital stock of the firm is \$10,000. The company will handle seeds, grain and cereals.

Capitalized at \$50,000, the Wicomico Farmers Association, Inc., was organized at Salisbury, Md. The company will deal in seed, fertilizers, farm implements, produce, etc. E. D. Adkins, W. C. Mitchell and Wm. M. Cooper are interested.

(Feed Seeds continued on Page 725)

## Transit Leaks

are unknown to the grain shippers who use

## KENNEDY Car Liners

Enormous Increased Sales prove the Efficiency, Merit and Serviceability of these liners.

## The Kennedy Car Liner

Is the only device offered the grain shipper that makes a car Leak-Proof. Cheap—Modern—Profitable. Write now for particulars.

THE KENNEDY CAR LINER & BAG CO.  
Shelbyville, Indiana, U. S. A.



of practically all their stock. Moreover, they predicted continued limited arrivals as invoices were coming in slowly. This latter statement caused little wonderment as it had been well known that farmers and country shippers were thoroughly disgusted with the much lower bids in circulation. From many interior points reports were received that farmers preferred to keep their hay until prices advanced or the weather became fine. This determination, coupled with the poor roads for hauling, reduced the deliveries at country stations to a minimum. Numerous advices were received regarding the material losses sustained by many shippers during the past two months or more, so that finally they had reached a point where they were determined to fight vigorously against further price reductions, refusing to sell unless at least a slight advance was forthcoming.

The somewhat firmer feeling that developed subsequently was regarded as entirely reasonable after such a big decline. In short, with hay bringing less than half what it was worth at the top of the market during the war, it was not considered strange that some rally should take place, and especially now that the roads are in such bad condition as to materially restrict the movement from the interior.

There has been no activity in the straw market. Demand was generally slow, partly because of the exceedingly mild weather. Nevertheless, prices have been strongly maintained, chiefly because of the uncommonly small receipts.

## KANSAS CITY HAY MARKET

BY B. S. BROWN

The trend of the hay market at Kansas City has been downward for several weeks, reflecting an irregular and at times indifferent demand, fairly liberal receipts and the absence of offerings of good quality. Continued mild, open weather has had an important effect in restricting demand from nearby feeders and dairies. Demand from retailers has been fairly good and at times has been the main support of the market, particularly for the better grades. Much low grade hay has been in evidence and has been a drag on the market, finding a slow and uncertain outlet. Supplies of Prairie hay have been scant and generally have been inadequate for a market. Offerings of tame hay have been liberal for several weeks, but the proportion grading contract or better has been disappointing. Clover has been the exception, few cars arriving that attracted buyers. The bulk of the trade recently has been in Alfalfa, for which there has been a good inquiry. As with other varieties, the proportion of No. 1 or Choice was insufficient for requirements.

Prairie hay the past few weeks has dropped 50 cents to \$1 a ton, the best selling as high as \$14 and the lower grades down to \$6. Midland Prairie and Lowland Prairie declined \$2 to \$3, sales ranging from \$5 to \$8. Timothy dropped \$1 to \$3, No. 1 selling at \$19 to \$21 and other offerings as low as \$11. Clover was nominally unchanged at \$10 to \$17. Alfalfa followed the trend in other varieties, declines ranging from \$1.50 to \$3.50, with the full loss quoted for the lower grades. Choice was quoted at \$21 to \$22 and other prices ranged down to \$8.

## NEW FEED BRANDS

During the month of February the U. S. Official Gazette of the Patent Office published the following new feed brands: "Dixie Poultry Products Ruby Comb Scratch Food" scratch food, chick food, mixed



**NUTRENA**

**Brooks**  
IS THE BEST

grain feeds for poultry, and poultry mash feeds. Neil Bros. Grain Company, Spokane, Wash. Filed July 6, 1920. Serial No. 134,597. "Nutrena" stock feed. Miller-McConnell Grain Company, Kansas City, Kan. Filed November 29, 1920. Serial No.

140,396. "Brooks" poultry food. The Brooks Company, Fort Scott, Kan. Filed October 14, 1920. Serial No. 138,275. Published and registered February 8. See cut.

## HAY TRADEMARK REGISTERED

On February 8 the trademark of F. Kieser & Son Company, Inc., Waverly, N. Y., for grains and feeds was registered in the U. S. Patent Office. Filed July 13, 1920. Serial No. 134,897. Published October 12, 1920.

A feed business is to be conducted at Covington, Tenn., by H. Cary.

A feed business has been opened at St. Marys, Ohio, by M. T. Stockwell.

Dr. Hary and his son, Schuyler, have opened a feed business at Cherokee, Okla.

A feed and produce business is to be opened at Grain Valley, Mo., by Roy Suddath.

Tom Davis has purchased the feed establishment of Wm. Ellenberger located at Havana, Ill.

David Snoeberger has purchased the feed business of Fred Casel located at Camden, Ind.

The feed and flour business and the mill at Janesville, Wis., has been purchased by Ed. Wiley.

E. T. Ingram's feed business at Rockwood, Tenn., has been taken over by W. F. Brown & Co.

Feed grinding machinery has been installed in the plant of the Farmers Exchange of Wilsall, Mont.

A new feed grinder is to be installed in the plant of the Wunston Grain Company of Frankton, Ind.

N. Theis has sold his feed and flour business at feed business of N. A. Hagstrom at Foreston, Minn.

A feed and flour business has been opened at Hickman, Tenn., by A. M. Thomas and W. R. Johnson.

A feed and flour department has been added to the business of Clifford & Co., located at Bemidji, Minn.

The feed mill of Ollie Hanson at Hazel Green, Wis., has been disposed of by him to Henry Schnorrenberg.

The feed and coal business of A. E. Pember at Ness City, Kan., has been taken over by W. O. Disney.

A wholesale and retail feed and flour business has been opened at Havana, Ark., by E. L. McBride and J. Davis.

The Stoll Grain Products Company has opened at Missoula, Mont., a wholesale feed and flour establishment.

The interests of Chas. Trapp in the Gilchrist Feed Yard at Topeka, Kan., have been purchased by W. A. Gilchrist.

A modern and up-to-date flour, feed and seed establishment has been opened at Charleston, Ill., by the Loving Bros.

Headquarters have been opened at Austin, Texas, by the Purity Feed Company of which M. A. Gossett is proprietor.

V. A. Werts has purchased the feed business of W. E. Coleman at Bunceton, Mo. He has also bought the grain elevator.

The feed and seed business of J. L. Whitlock at Mt. Vernon, Ill., has been sold by him to Ed Willis of Belle River.

A feed business has been opened at Albany, Texas, by J. S. McComb. He will handle hay, corn, bran and all kinds of feeds.

A feed store is to be established in a new town near Duncan, Stephens County, Okla., by Carl Guenther of Greenfield, Mo.

To handle all kinds of feedstuffs, such as hay, grain, etc., a brokerage office has been opened at Valdosta, Ga., by Alex Bealer.

A. R. Hossie, feed and flour merchant of Perth, Ont., has been succeeded in business by E. Erwin, who will operate on same policy.

Business operations have been commenced at Poplar Bluff, Mo., by the Poplar Bluff Flour & Feed Company. John Graham is manager.

A seed and feed business has been opened at Lawrenceburg, Tenn., by the Remke Seed & Grain Company. A. R. Remke is manager.

A feed business has been opened at Bryson City, N. C., by the Dehart Feed Company, which is composed of A. F. Dehart and D. Dehart.

Dan Bias, John S. Priedmore, G. L. Panley, M. V. Fisher, E. U. Ashenhardt and others have organized the Hamlin Feed & Transfer Company of Hamlin, W. Va. The organization is capitalized at \$10,000.

Articles of incorporation were filed recently by the Hoquiam Feed Company of Hoquiam, Wash., capitalized at \$10,000. The directors are: Thomas Sutherland, O. Sutherland and Thos. Sutherland, Jr.

A feed business has been opened both at Kansas City and St. Joseph, Mo., by J. W. Amrine and H. M. Goldwood. They were formerly associated with the W. A. Ferson Hay Company in the feed department.

C. W. Watts' feed store at Calhoun, Ga., has been purchased by C. D. Miller. He will operate under the firm name of the Miller Feed Company.

The Frisbey Fuel & Feed Company of Independence, Mo., has been dissolved. C. G. Frisbey purchased all shares in the company before the dissolution took place.

E. W. Channel, W. M. Sommers and I. H. Channel have incorporated the Morgantown Flour & Feed Company of Morgantown, W. Va. The capital stock of the firm is \$100,000.

A feed grinding mill has been installed at Helena, Mont., by the State Nursery & Seed Company. The plant turns out a standardized, well balanced scratch feed for poultry.

The Sublette Feed & Supply Company has been incorporated at Bluefield, W. Va. S. J. Sublette is one of the principal incorporators. The capital stock of the firm is \$10,000.

The Bergman Millfeed, Inc., has been incorporated at Minneapolis, Minn., capitalized at \$50,000. J. H. Bergman, Patrick Collins and Paul J. Marvin are the incorporators.

L. N. Craghead, O. V. Craghead, R. L. Hatfield have incorporated as the McAlester Wholesale Flour & Feed Company of McAlester, Okla. The company is capitalized at \$10,000.

John Harris has purchased D. A. Ewing's interest in the Ewing Bros. of Ottawa, Ill. Hereafter the company will operate the Daly Feed Mills of North Ottawa as Ewing & Harris.

The John H. Webb custom feed mill at Carterville, Mo., has been leased by Alva Green and J. W. Mathis. The mill has been closed for three years but will be put into operation again.

An extensive line of feeds is to be carried at Powhattan, Kan., by the recently incorporated Farmers Co-Operative Union. Ed Storm and others are interested. Its capital stock is \$25,000.

John and Frank Duflo are no longer associated with Louis Bush in the feed and flour business at Lowville, N. Y. These two will organize a partnership and will conduct a feed and flour mill.

Additional machinery equipment is to be added to the equipment of the Lincoln Milling Company of Merrill, Wis. It will increase the capacity of the company for manufacturing balanced feeds.

To conduct a feed and flour business, the Woodstock Milling Company was incorporated at Woodstock, Ill., capitalized at \$50,000. B. T. Smiley, F. L. Bonslett and Wm. Bonslett are interested.

A mixed feed plant of from 150 to 200 tons' capacity is to be erected at Belvidere, Ill., for the Rogers Grain Products Company. The establishment will also include a 50,000-bushel elevator.

A site at Bryan, Texas, has been purchased by the I. N. Conyers Live Stock & Feed Corporation. The company will erect a building costing \$25,000 and will conduct a wholesale hay, grain and feed business.

J. F. Cloke, F. G. Doyle and Olive Huber have filed articles of incorporation as the Rueff Bros. Company of Covington, Ky. The company will handle feed, flour and hay. The firm is capitalized at \$15,000.

Articles of incorporation have been filed at Chisholm, Minn., as the Merchants Feed Company, capitalized at \$25,000. Adolph Johnson, L. H. Sulkonen, Andrew F. Hulme, Mike Salminen and L. H. Liend are interested.

The Norton Feed Company has been incorporated at Richmond, Va. The minimum capital stock will be \$15,000; the maximum, \$30,000. H. M. Bandy is president; Monroe Hubbard, secretary and R. H. Bolling incorporators.

A wholesale store is to be opened at Fort Payne, Ala., by the Winer Feed Company of Chattanooga, Tenn. Quarters have been obtained in the warehouse of the Fort Payne Warehouse Company. J. J. Tolbert is manager.

DeWitt Ballew, A. J. Epstein and R. L. Colding are named as the incorporators of the Savannah Flour & Feed Company of Savannah, Ga. The capital stock of the firm is \$10,000. The company will deal in feed and flour.

The wholesale feed and flour business formerly conducted by the Western Grain Company at Ft. Smith, Ark., has been purchased by the Kansas City Flour & Feed Company of De Queen, Ark., controlled by W. L. House and S. E. L. Smith.

(Hay, Straw & Feed Continued on Page 728)

## Alfalfa, Prairie Hay and Alfalfa Meal

were harvested under ideal weather conditions. We command a large supply. Get our delivered prices.

## CARLISLE COMMISSION COMPANY

736 Live Stock Exchange Kansas City, Mo.

**ALFALFA**  
We are the Largest Distributors  
of ALFALFA in  
GREATER NEW YORK  
Shippers who have Alfalfa Hay to dispose of, if they will  
communicate with us we will provide a satisfactory outlet.  
**ALFALFA**  
A W. D. Power & Co., 12-15 N. Y. Hay Exchange  
NEW YORK



## FIELD SEEDS

(Continued from Page 723)

The seed house and equipment of Theodore H. Runte at Hilbert, Wis., has been purchased by the Farmers Elevator Company.

Business operations have been started by the Capital Seed Company of Columbia, S. C. The company carries a complete line of seeds, and dairy and poultry supplies. Fred D. Marshall is president; H. J. Brabham, treasurer; F. S. Bishop, manager.

The organization was recently completed of the Kittitas County Pure Seed Growers Association in Kittitas County, Wash. The Association will devote its time to enlarging the sales and increasing production of Dicklow wheat and Abundance oats.

The Bellingham Seed & Feed Company has been incorporated at Bellingham, Wash., to handle seed, feed and farm specialties. B. W. Bartlett, J. H. Whitney are the incorporators of the firm. They were both formerly employees of the Chas. H. Lilly Company of Seattle.

## ABUNDANT CROP OF SUDAN GRASS SEED

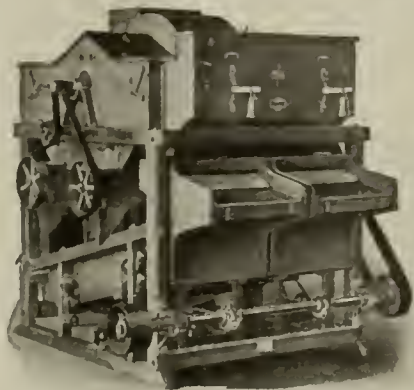
A recent issue of the *Weekly News Letter* of the Department of Agriculture says: "Reports to the United States Department of Agriculture from the southern Great Plains, especially Texas, indicate that the Sudan-grass seed crop was exceptionally good last season. Every farmer who attempted to grow a crop of seed was rewarded with a harvest about twice as large as he had been led to expect. This unusual seed crop has resulted in glutting the Sudan-grass seed market, with a consequent reduction in prices. The Department advises that Sudan-grass seed can be purchased at the present time in wholesale quantities from reputable seed dealers at from 3 to 5 cents a pound. Some seed growers are complaining that they find it impossible to market their seed for even 1 cent a pound.

"The acreage of Sudan grass has been considerably curtailed in the past by the fact that farmers were forced to pay 15 to 20 cents a pound for seed. Under present conditions, with an opportunity to buy seed at a low price, it is a good time for farmers in the Central States to provide themselves with a field of Sudan grass next year, which can be used either as an emergency hay crop or a summer pasture."

"Another suggestion of practical value to farmers  
(Continued on next page)

For unlimited profits and for greatest efficiency in your mill or elevator, install

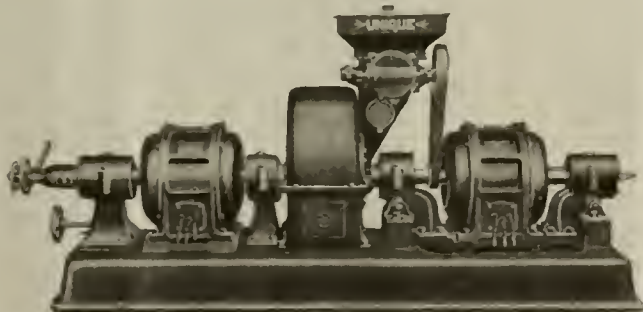
## Unique Milling Machinery

RECEIVING  
SEPARATOR

This machine will save its cost in a short time by removing sticks, straws, stones, fine seeds, sand, etc., from the grain as it is brought to your plant, thereby saving the price you would be paying for good, clean grain.

All modern improvements and conveniences are incorporated in this UNIQUE Machine and it will operate efficiently at all times. Operator can conveniently change sieves to suit the product being received.

## BALL BEARING ATTRITION MILL



Motor Driven. Belt Driven if Preferred.

Here is a machine representing the most efficient feed grinder on the market. Its numerous patented improvements assure the owner of MORE and BETTER grinding CHEAPER. A UNIQUE Mill will prove a valuable asset to your equipment.

GET OUR CATALOGUES FOR COMPLETE DESCRIPTION

**Robinson Mfg. Co.**  
P. O. Box 18 Muncy, Pa.

The UNIQUE Flour, Feed and Cereal Mill Builders.

Collections of  
Your Claims  
Assured

The shipping scale is a most important piece of machinery in a country elevator. Its purpose is to determine the amount of grain delivered to a railroad for shipping. If the railroad will not accept your statement of weights, your scale is practically useless as it fails to perform its most important function.

Railroads will not recognize weight tickets from old style hopper and automatic scales when adjusting claims.

THE  
BIRD SHIPPING  
SCALE

will prove to the railroads through your scale ticket the exact amount of grain you delivered to the car and it will hold good when it is presented for claim in case of loss.

This one feature alone makes the Bird Shipping Scale the most desirable scale on the market.

Millions of dollars worth of grain are lost every year by country grain shippers. A scale that is recognized by the authorities is the kind of a scale that will eliminate disputes and losses.

The Bird is such a scale!

**THE STRONG-SCOTT MFG. CO.**  
413 SOUTH THIRD STREET, MINNEAPOLIS



who have become convinced of the value of the grass is that they lay in a sufficient supply of Sudan-grass seed to provide for their needs not only this year, but in 1922 also. The discouragement caused by the failure of seed growers to market their product at a reasonable price will undoubtedly cause a shortage of seed the coming year. This will in turn react on the price, and it is likely that Sudan-grass seed will again be selling at 10 to 15 cents a pound within the next two years."

## NEW PROCESS OF SEED SEPARATION

A new process of seed separation has been invented and patented by E. D. Eddy, formerly Chief Seed Inspector for Canada. Neither screens nor air currents are used, the separation being on the basis of comparative specific gravity. The seed is put into a liquid having a density greater than the lighter grade of seed and equal to or less than the density of the seeds or contained material composing the heavier grade, the density of the liquid being varied according to the separation desired. By regulating the density of the liquid the proportion of the seeds which pass into the heavy and light separations is under perfect control.

Tests so far made have been mostly with small seeds. It is expected, however, that valuable results will be secured also with the grain by removing barley and oats from wheat, oats from barley, etc. in addition to the separation of weed seeds. The process is being developed with the idea of putting it on a commercial basis.

## NEW YORK SEEDS MARKET UNSETTLED

BY C. K. TRAFTON

The local market for field seeds got off to a rather slow start, and then was hampered for a time by the uncommonly heavy snow storm. With the return of clear and warmer weather demand became much more active and in many cases immediate shipment was wanted. This confirmed recent claims to the effect that the hand-to-mouth buying policy formerly followed by many distributors here and elsewhere had caused an almost depletion of stocks in certain quarters. Nevertheless, while many prices are practically the same as a month ago, others are lower, notably Alsike, which shows a loss of roughly 2 cents.

Red Clover supplied the feature in the late revival of demand, there being an especially brisk call from the South with the advent of warmer. This urgent call brought to light a striking shortage of supplies here, lending additional confirmation to our statement last month that few if any wholesalers here had supplies of importance. It is true that the arrivals from France showed further enlargement, being roundly 10,900 bags against about 8,800 bags in January, but it was pointed out that the bulk of the large shipments went directly to large dealers on the Seaboard and in the West, notably Chicago. According to well informed importers, the arrivals this month will probably be about 5,000 bags, which will bring the total for the season to about 25,000 bags, against roundly 65,000 last year. There have been further offerings from

France at 14½ @ 16c c. i. f. New York for April shipment. This is about 2 cents below the prices paid for March shipments, but importers have shown no interest in April offerings as the seed would arrive too late to be of use. Italian offerings have continued too high to attract buyers here and it is evident that shippers in that country have been doing better with buyers in Germany and neighboring countries. According to reliable authorities, there is no truth in recent rumors to the effect that Red Clover has been offered at "bargain" prices in this market.

The drop in Alsike is ascribed to the fact that certain dealers who had stocked up at higher prices have been anxious to liquidate, although there has been no excessive supply of spot goods. The uncertainty as to the outcome of the German negotiations is also having an unsettling effect on other varieties, such as Timothy, Red Top, and Kentucky Bluegrass in which export business may be done in the event of satisfactory financial arrangements.

Timothy quotations reflect a great deal of uncertainty and irregularity. While some dealers are inclined to hold at unchanged prices, others quote as low as 6¾ cents against 7¼ @ 7½ cents a month ago. The easier tone noted in some quarters is ascribed to the indifferent local demand and the lack of additional business of importance for export. Meanwhile, it is pointed out that there is a large carry-over of old seed, some of it from the 1918 crop. Some of this shows substantial losses, and hence holders are anxious to liquidate. Exports during the month were about the same as in January, roundly 2,475 bags.

Alfalfa quotations likewise indicate a wide difference of opinion as to values, some quoting the same as a month ago, viz. 15 @ 17 cents, while others say that seed is available at fully a cent lower. A fair business has been done by some interests, but others say that buyers are holding off because of the fine new crop in the West which is offered at about 14 cents. There have been further offerings for prompt shipment from France and Italy at 14 cents c. i. f. New York, but no business has been done and there have been no arrivals; nor have there been any exports.

Red top has also been unsettled, some quoting as low as 11½ cents, while others held firmly to last month's quotation of 12½ @ 13½ cents. There has been a fair demand for lawn grass use, but as a rule supplies have been excessive as many dealers stocked up heavily in anticipation of a better demand from Germany. The failure of the latter to materialize owing to exchange conditions has made some holders anxious to get out even at substantial losses.

Blue Grass is firmly held in some quarters at unchanged prices; 26 @ 27 cents owing to larger clearances, roughly 925 bags during the month, but among speculative holders there is said to be more pressure to sell. Rapeseed has been in fair demand for planting and is quoted at 7¼ @ 7½

cents or about the same as a month ago. About 650 bags arrived from Europe during the month. Canary seed is said to be in a decidedly weak condition as stocks here are large and large consignments are expected on several boats due to arrive from Argentina in the near future. Some spot lots are available as low as two cents a pound, which is below the cost of production in South America. Shippers there are offering at 3.10 cents c. i. f. New York, but, of course, business is impossible. Because of these conditions some dealers expect the market to remain weak until next year. Sunflower seed has been in poor demand and there is said to be an ample supply of South American seed, some of which could be bought at as low as 3 cents per pound.

The opinion is expressed in some quarters that a large quantity of German Millet, known as Liberty or Golden Millet during the war, will be used in case the weather this month is 'nice and dry. Considerable inquiry has already developed and there has been some buying in a small way at about 4 cents.

Imports during the month included about 640 bags of rye grass, 160 bags of meadow fescue, 460 bags of other grasses, and 50 bags of vetch. About 460 bags of fescue were exported during the month.

Late in February a notice was published in the New York newspapers to the effect that a petition in bankruptcy had been filed against H. W. Doughten & Co. Inc., seeds, at 59 Pearl St., New York, by the Argos Corporation, a creditor on a claim of over \$7,000. Liabilities are said to be about \$700,000 and free assets are estimated at about \$5,000. Following the appointment of a receiver to handle the business it was stated that Mr. Doughten had organized a new company under the name of the Doughten Seed Company with headquarters in Jersey City, N. J.

## NEW SEED TRADEMARKS

During the month of February the following new seed trademarks were published in the *Official Gazette* of the U. S. Patent Office: "Superseed" garden, field and flower seeds. John A. Salzer Seed Company, La Crosse, Wis. Filed December 30, 1919.

**PARROT BRAND SEED**  
SPEAKS FOR ITSELF<sup>SM</sup> **GROWMORE Superseed**

Serial No. 126,660. "Parrot Brand Seed 'Speaks for Itself'" field and garden seeds. Purcell Seed Company, Evansville, Ind. Filed November 24, 1920. Serial No. 140,144. "Growmore" field, vegetable and flower seeds. Gardner Seed Company, Rochester, N. Y. Filed October 14, 1920. Serial No. 138,284. See cut.

## THE C. S. BRENT SEED CO.

Wholesale seeds and grain  
LEXINGTON, KY.

## The Mangelsdorf Seed Co.

Sweet Clover, Alfalfa,  
Soudan Grass, Millet, Rape.

ATCHISON KANSAS

## North American Seed Co.

Wholesale Grass and Field Seeds

Milwaukee, Wis.

"THE HOUSE OF QUALITY"

Exporters. Importers.  
**NUNGESSER-DICKINSON SEED COMPANY**

NEW YORK, N. Y.

Headquarters for  
Imported Clover and Alfalfa Seeds

**SEEDS** Grain, Clover and Grass Seeds  
**CHAS. E. PRUNTY**

7, 9 and 11 South Main St. SAINT LOUIS

## WHITNEY-ECKSTEIN SEED CO.

Wholesale Seed Merchants

Correspondence Invited

BUFFALO, N. Y.

**SEED**

We buy and sell all varieties of grass and field seeds

The Albert Dickinson Co.  
MINNEAPOLIS CHICAGO



## For Sale

[Copy for notices under this head should reach us by the 12th of the month to insure insertion in the issue for that month.]

### MACHINERY

#### WANTED, TO BUY

Second-hand 100 to 125-bushel hopper scale. BOX 106, Sioux Falls, S. D.

#### FOR SALE CHEAP

A 1,000-bushel Klingler Automatic Scale. ROOM 406, SECURITY NATIONAL, Sioux Falls, S. D.

#### FOR SALE

Good 20-horsepower Fairbanks-Morse Gas Engine. Can be bought at a bargain. FARMERS' CO-OPERATIVE UNION, Sterling, Kan.

#### FOR SALE

Two 9x24 double roller mills, Combs Feeders, Eureka Magnetic Separator, belting, pulleys, shafting complete, ready to install. Also Mitchell Park Pneumatic Dust Collector. E. L. WARD, Gardner, Kan.

#### OIL ENGINES FOR SALE

60-horsepower Fairbanks-Morse.  
50-horsepower Otto.  
25-horsepower Fairbanks-Morse.  
50 other sizes.  
A. H. McDONALD, 550 W. Monroe St., Chicago, Ill.

#### QUICK SALE—SOME BARGAIN

25-horsepower Fairbanks-Morse Oil Engine with clutch, fuel tank and Wizard Magneto, all complete, shop No. 108371; immediate shipment and in dandy shape; \$650 f. o. b. cars Saginaw. Some bargain. SULLIVAN SUPPLY COMPANY, Cor. Genesee and Water, Saginaw, Mich.

#### NEW AND USED ELECTRIC MOTORS BOUGHT AND SOLD

For Sale: 25¼ horsepower, 110 volt, 60 cycle, single phase new motors, factory guaranteed, at \$25 each. Bargains in other sizes. Terms—25 per cent with order, balance C. O. D. We pay spot cash for motors. Send description and price to prevent delay. GENERAL DISTRIBUTING COMPANY, Dept. A.M., Duluth, Minn.

#### MACHINES FOR SALE

Sprout Waldron make:—One Monarch 6 section by 10 self-balancing, ball-bearing swing sifter, Style E.

One No. 2 Monarch receiving separator with extra screens for corn and oats.

One Monarch, 9 by 24, 3-high roller mill (almost new).

One No. 2 Monarch dust collector.

All machinery has been used very little and in good shape. Reason for selling, we are increasing capacity. MANASSAS FEED & MILLING CO., Manassas, Va.

## ELEVATORS AND MILLS

#### WANTED

To hear from owner having elevator, mill or other property for sale. Give cash price and particulars. JOHN J. BLACK, Chippewa Falls, Wis.

#### FOR SALE

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Applications, stating age and experience and when services would be available, accompanied by copies of testimonials, must, in the first instance, be addressed to the Secretary of the Board of Grain Commissioners for Canada, Fort William, Ontario, and reach him not later than March 26th, 1921.

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## Hay, Straw and Feed

(Continued from Page 724)

T. V. Hurt has sold out his interest in the Norton Feed Company of Norton, Va., to R. H. Bolling. Mr. Hurt founded the business about a year ago.

Business has been started by D. G. Mallog of Van Buren, Mo., in the place which he purchased from J. J. Holland. He will carry a full line of feeds, groceries, etc.

The contract has been let by L. B. Whitfield for the erection of a new storage building at Broken Bow, Okla. He is at the head of a feed and flour company there.

The flour and feed business of Davis E. Gamble at Monongahela, Pa., has been purchased by Joseph Warne. L. Milhoan was retained as manager by the new owner.

The Maritime Milling Company of Buffalo, N. Y., has employed C. P. Wolverton as sales manager and grain buyer. He was formerly with the Globe Elevator Company.

### PROGRESS IN FEED MANUFACTURING

BY R. W. CHAPIN

(Continued from Page 656, February issue)

The general and most important criticism of mixed feeds is that they cost too much. No one is going to stand up and assert that a manufactured article can be made without adding the manufacturing cost to the raw material cost. There are a host of things that go with a complete article that do not go with raw materials, one of the most important of these is results. It must do this or it won't sell. Raw materials must be skillfully combined or they will not furnish service. Not all are skillful enough to do this as it is performed by experts or specialists.

The question of price comparison is a very deep subject. To discuss prices thoroughly calls for a knowledge of prices. It is very easy for a theorist to figure that you can produce a ton of steel rails for \$20 yet if he tried to do it himself it might cost him \$10,000, and there may be times when the cost in the steel mills is 10 times that of the theoretical cost due to light production and a whole lot of other vicissitudes.

A favorite amusement seems to be the collection of alleged feed prices and constructing a paper mixed feed out of these prices, and proving how cheaply it can be done. Feed prices are nothing but debatable statistics. The only real price of a feed is the one you have had to pay. Until you have paid the price you don't know what it will cost you to produce a mixture. You can't go back and look over old prices and figure out what you might have done. Maybe there was a feed behind the price and maybe not. The ultimate time of delivery, location, quantity available and quality of a feed are all variable, and they cannot be taken into account in an academic discussion. The only way to learn what it costs to make a mixed feed is to start in making it and you will very soon find out. Nor can any tenable argument be advanced that any of these prices, losses and service costs are unnecessary, that they can be dispensed with and thereby save the farmer large sums of money.

To give a man feed when he wants it you have to buy it and keep it on hand a long time before he calls for it. In the interim it might go up or down, so you have a market risk, and it may be a market loss. These are all a part of a business man's burdens and he is not complaining, but the theory that there is available a method that will avoid all risks and all expenses is simply a theory, and not founded on any known facts.

It is perfectly true there are times and places in a widely shifting market when some farmer can collect his raw materials by chance, mostly good luck, assemble them and manufacture them apparently as cheaply as a manufacturer, but this does

not happen every day in the year, nor does it prove anything. Few at least can do this, and the known fact is that the great bulk of our food stuffs must be carried in central magazines and furnished to the public when they need them. Some one has to perform this function. The feed manufacturer is a skilled purchasing agent, a warehouseman, a banker and likewise a business adviser of the feed dealer and the farmer.

He conducts his great business in which millions of capital must be invested and used on a remarkably small margin of profit, and sometimes at a loss. The labor and manufacturing costs are often less than the daily fluctuations in the cost of materials used. You cannot make a saving in beating the market because you can't beat men who have done nothing but buy these articles all their lives, and must necessarily be more skillful than novices. Certainly not in the cost of distribution, because the merchants who distribute the feed are held down to such a low percentage of profit that it just about represents a meager salary for their management.

This is not saying that where a man has some skill in feeding animals he cannot hit upon some superior mixture of his own device, but it is saying that the average run of men have not this skill, nor have they the education to acquire it.

The basis of all modern prosperity is the factory system, by which the production of a man has been increased many fold, the result being comfort, happiness and luxuries for every man. Only about a half century ago, due to the lack of factory production the population had to make at home a large part of the goods they consumed. However efficient they may have been personally they could not compete with machinery, nor can any one at the present time. Factory production on a large scale along with the division of labor that makes each worker wonderfully skilled for his own task, has so lowered costs and increased output that elaborate articles like automobiles and other things too numerous to mention are within the reach of all. Any one who would claim that hand production is cheaper and better than machinery and factory production is simply talking against the experience of mankind.

We consider it out of place to advise farmers that it is very simple to feed cattle on any of a hundred different prescriptions. This is, of course, absurd because feeds are not all interchangeable. One mixture will not always do the work of another, and no one can say off-hand whether his formula will be as good as some one's else. This is only proved by practical demonstration.

Manufacturers are practical. The slightest deficiency in the quality of their goods would jeopardize their whole business. They are not, as a rule, selling to the ignorant members of the community, but to all including the most intelligent ones as well as those who lack the good fortune of an education.

A man is usually capable of making or doing one thing well. He buys possibly a thousand things made by a thousand different people. How can he be put in touch with the thousand people that make these things without the so-called middlemen or dealer? Division of labor and specialization of work is one of the greatest developments of modern civilization.

When our forefathers on the farm made everything they used from necessity, they were simply drudges and unproductive workmen in most cases. Life was a mere existence until the modern factory system was evolved whereby one man could make a hundred pairs of shoes in the same time it used to take a cobbler to make one.

Every community must support certain specialists, among them a doctor, store-keeper, feed dealer and all other forms of occupation necessary to maintain life, health and comfort. You cannot half support a feed dealer and keep him alive. He must either quit his occupation from lack of support or become a charge on the community.

It seems to be one of the many dreams and delusions of a certain number of mankind that the

middleman can be dispensed with. You rarely find these views advanced by practical men who have ever done any business. Such ideas are always promulgated by impractical theorists, who have never soiled their hands with trade.

When their plans are analyzed they always turn out to be the old fallacy of substituting a new middleman for an old one. These theorists advance what they call direct buying. This, of course, is not direct at all. This simply means that the farmer buys from some broker instead of his retail dealer, or some co-operative organization and, of course, he cannot possibly buy as close as the dealer can for various reasons, among them the dealer's skill in buying. This direct buying always cripples the dealer and deprives him of some of his just earnings. His losses have to be made up by the rest of the community.

We realize there always have been and always will be a number of men who have money and will insist upon buying things outside in larger quantities at somewhere near wholesale prices. Many of them find that it pays them to go to the dealer and pay him a commission because of his skill, and this commission costs them nothing, being made up by better buying.

Necessarily this so-called direct buying cannot be carried on to any great extent because it must be done for cash, and the average person has not enough ready cash to buy in large quantities and he must buy on credit, using the merchant as a banker. The dealer must therefore charge the credit buyer enough more to make up for what he loses.

There are a lot of people who never will understand that they have to support the institution in their community, and they are only spitting themselves when they fail to do so. If, however, this direct buying were continued to any greater degree, as many farm papers, county agents, and cow testers, as well as Government employees are constantly urging, it would simply make the dealer's business so unprofitable he would have to close up shop, and then the community would have no feed store.

During the war when many dealers ran out of many necessary feeds the farmer woke up to the realization of what a calamity it is to have to go 20 miles to get feed to keep the animals from starving, or else wait for a month and have a herd's production greatly impaired for lack of proper feeds.

The dealer is like your town doctor. You must either support him or get rid of him and take the consequences. You cannot half feed a horse and get any work out of him. There is no substitute for a dealer's feed store except some other feed store that is exactly like it and the cost of maintaining and managing one feed store is just the same as another; so is the cost of management.

There are too many people that think they are jacks of all trades and think they can do anything just as well as any one else, ignoring the value of training and experience. Unfortunately these versatile persons always want to exercise their talents with other people's money, naturally having accumulated none of their own.

The mixed feed industry like all others has just passed through a business earthquake that has demonstrated the precariousness of business life. Those who think the manufacturer's lot is an easy one should learn of the great risks he takes, the strain of competition, the onslaught of ill-advised legislators, the many well-meant but unfair attacks by educators, and the small rewards he gets for serving the community.

The Association is planning greater activities in respect of explaining their members' functions for both the public and the world of educators, and above all to show how their course is shaped by irresistible forces of supply and demand and the practical requirements of their ultimate customer, the farmer. This feed industry needs no defence but we cannot refrain from answering and refuting so many irrelevant and unsupported charges backed up by a sort of pseudo science and self imposed authority.

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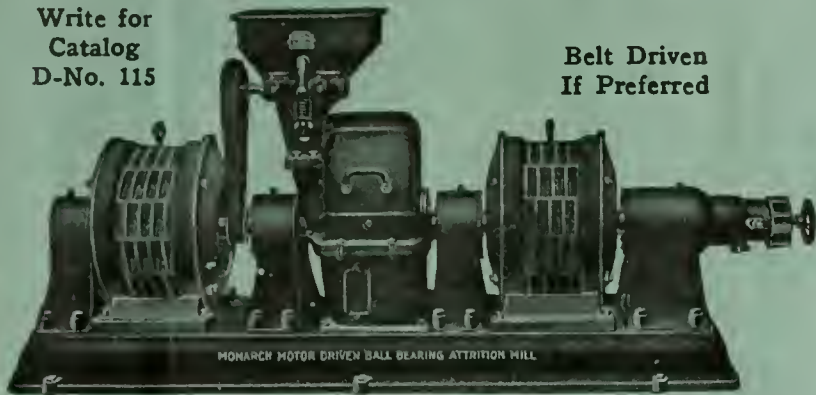
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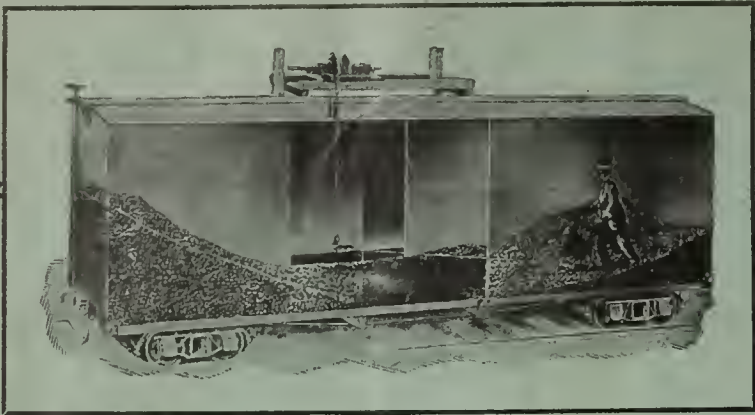
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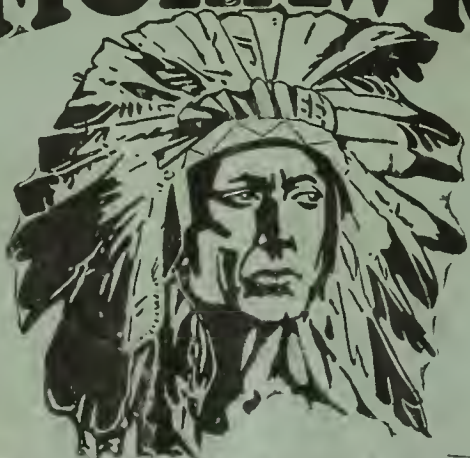
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